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INDUSTRIAL ACCIDENTS AND NEW LEGISLATION

SOME IMPLICATIONS OF THE NATIONAL INSURANCE (INDUSTRIAL INJURIES) BILL, 1945*

BY

DONALD STEWART, M.D., F.R.C.P.Ed.

This new legislation is a significant social measure. Its provisions fundamentally change the present system of workmen's compensation, which has frequently tended to retard recovery and interfere with treatment and rehabilitation. Properly administered, and with due regard to the need for the Minister of National Insurance maintaining it as a social service dealing with persons and personalities, the scheme should prove a great improvement over the Workmen's Compensation Acts, which it replaces; it should remove much of the friction which present conditions can stimulate between employee and employer, and should promote a feeling of greater security on the part of the injured worker and thus assist rehabilitation and accelerate his return to work. But new legislation which can materially influence the work of the medical profession—and in which the medical profession will have to take a most active part—needs careful examination; not only are there clinical and social implications in this Bill which should be fully understood, but certain difficulties, some preventable, may well arise when putting it into effect.

A Contributory Scheme

A basic change in principle is that the scheme is to be run on a contributory basis; the workman now, for the first time, becomes a partner in payment. No graded annual premiums will in future be paid by employers to insurance companies, mutual or tariff; nor will employers be permitted to carry their own risk as self-insurers. The employee will contribute to an Industrial Injuries Fund by weekly payments, and from this fund will be paid out all benefits and other expenses—e.g., administrative charges—incidental to the scheme. The weekly payments by insured persons into the fund, by stoppages from wages, will vary from 4d. for men, 3d. for women, 2½d. for boys under 18, to 2d. for girls under 18. The employer will pay similar amounts. (These payments are additional to the weekly contributions to the new National Insurance Fund, and already workers have said that they propose to use this compulsory levy as an argument for increased wages.) The fund will be aided by a contribution from the Exchequer—but only if the Treasury agrees that it is necessary—equal to one-fifth of the aggregate amount collected. It is estimated that, normally, the annual contributions will amount to £23 million; so this, plus the Government's share, will produce an annual income of £27½ million.

Persons Affected

Those to be insured under the Bill are defined as "all persons employed in insurable employment." This group is further defined as "those in employment in Great Britain under any contract of service or apprenticeship, whether written or oral, and whether expressed or implied." Exceptions to this include groups such as those employed in the naval, military, and air Services of the Crown; the police force; and certain workers, not yet prescribed, in other employment under the Crown or under a public or local authority. Nurses are excluded at present, but a plea has been made for their inclusion. The number of persons classified as "employees" in the social insurance plans of the Coalition Government was approximately 13½ million men and 4½ million women,† so if we exclude the "exceptions" to be decided by Parliament (and postulate, say, 75% employment in the country) the number of persons affected and at risk must be well over 10 millions.‡

A New Basis for Benefit

The benefits to be paid are clearly divided into two categories: (*a*) an injury allowance, payable for a maximum of 26 weeks; and (*b*) a disablement pension, "payable where the workman continues to be incapable of work after the 26-week period."§ In both categories dependants' allowances are paid. By previous standards, which have been substantially increased since 1940, the benefits are generous, but an important issue is raised when these rates are compared with the new health insurance benefits proposed in the National Insurance Bill, made public for the first time on Jan. 29, 1946 (see below).

The fact that compensation in future will be based not on loss of earning power but on the character of the physical injury suffered will tend to remove that discouragement of recovery of earning power inherent in any scheme which reduces compensation when earnings increase (*Times*, Oct. 16, 1945). But there may be difficulties. An obvious one can be seen from the fact that the loss of a finger may leave the earning power of one man unimpaired, while it can seriously interfere with the earning power of another man; yet both will receive the same allowance or pension. It seems reasonable to suggest that adequate financial provision should be made for those cases in which a person can neither be reinstated in his own work nor be re-trained for equivalent employment. Such cases are likely to be few in number.

Relation to the National Insurance Bill

The discussion in the House of Commons on Oct. 10 and 11, 1945, revealed a tendency to consider this particular section of the social insurance plan for the country in isolation from the rest of the structure, into which it must ultimately fit (*Times*, Oct. 12, 1945); there was little regard to the cost to the community of the new social insurance system as a whole and of other social services, such as war pensions, and services for restoring and resettling the disabled; such isolationism tended to push the provision for industrial injury payments and their

* Based on a paper read to the Birmingham Group of the Association of Industrial Medical Officers on Dec. 11, 1945.

† Social Insurance, including Industrial Injury Insurance, Guide to Government's Plan (1944), H.M.S.O., p. 6.

‡ In the year 1938 some 460,000 persons received £6½ million compensation under the Workmen's Compensation Act, out of a population at risk of about 7,800,000.

§ The scales of payment (which may yet be altered in some respects before the Bill finally becomes law) are set out in Sections 11–18 of the Bill as amended by Standing Committee A of the House of Commons. The weekly rate for a single man is 45s.; for a married man an additional 16s.; and for a married man with one child, a further 7s. 6d. Pension rates are 45s. (for 100% disablement), graded downwards to 9s. (for 20–30%), with additional allowances under special circumstances. Where permanent disability is less than 20% a gratuity (up to £100 maximum) may be paid.

costs still further out of line than they already are with the other and larger plans of the new insurance system. This prediction has now proved to be well founded. The *Times* (Jan. 25, 1946) comments as follows:

> "The new rates [of sickness benefit] stand in sharp contrast with those now incorporated in the amended Industrial Injuries Bill for a group of disabilities associated with employment; and many will inevitably feel that these have been arbitrarily selected for exceptionally favourable treatment."

Even so, the trade unions are pressing for still higher rates of benefits in respect of industrial injury. The Minister has made the minimum weekly rate 45s., but the T.U.C. asks for 55s.‖ These rates should be compared with the non-industrial disability benefit of 26s. proposed in the National Insurance Bill. Under the National Insurance Bill survivors' benefits are confined to widows; under the Industrial Injuries Bill "unmarried widows," housekeepers, widowers, fathers, mothers, and other relatives are all included in varying degrees.

This gap between ordinary and industrial disability benefits may readily give rise to abuse; the sick worker, comparing the two schemes, may try to obtain the more favourable return for his contributions, claiming that his disability was caused by his work. In time this may cause psychological disturbances among individuals, frustration, obsessions, and anxiety states, and in due course could be detrimental to industrial efficiency and the national health. These points are no argument for reducing in any way the present financial proposals, but they do indicate that unless there is a levelling up there may be social and economic difficulties which could well retard medical treatment and rehabilitation in the non-industrial case.

One other relevant matter is the possibility that an era of increased benefits may lead to a diminished desire to work on the part of certain individuals. There may well be an increase in the number of those who "enjoy" bad health and disablement, frequently using medical reasons as an excuse for absence from work. Malingering may increase. Economically this is important; the nation cannot afford to keep such persons in benefit with no return to the community in the form of productive work. In this connexion the *Times* (Jan. 25, 1946) has summed the matter up thus:

> "If the standard of living of those able to work is not to suffer in order to enhance the well-being of those unable to work, the Labour plan for social security (and this includes this Bill) requires more from the nation, and especially from the worker, of effort and sacrifice to enlarge the total national income available for distribution. When the ordinary man comes to reflect on the total weekly contribution required of him under the new system, it may serve as a reminder, which the Government now need to drive home in every possible way, that the price to be paid for social security is efficient productive work."

Some Fears

There is a fear that the new legislation will mean the introduction of more complicated machinery than exists at present. When a claim is made in respect of any industrial accident there will be five persons concerned—the workman, the employer, the Government's insurance officer, a Post Office clerk, and the doctor. The workman must give notice to the employer (as at present); he must also notify the insurance officer, giving particulars of the injury and of his family responsibilities; and this must be accompanied by a certificate from the doctor or hospital authority concerned. The employer is also required to report the injury to the insurance officer, who then can make "such further inquiry as may seem desirable"—presumably investigating circumstances at the place of work to determine liability under the Act—and finally authorize payment of the appropriate allowance through the Post Office. As a large number of injured workmen resume work within a week or two it may happen that these formalities cannot be carried out before disability comes to an end. But even with the present system there is often much delay in payment of compensation—for example, in cases of dermatitis where there is frequent doubt about its occupational origin.

‖ The National Union of Mineworkers has recently put forward a claim that miners should receive a 50% increase in benefits (*Times*, Jan. 29, 1946) because of the dangerous nature of the industry. This should be financed by a levy on the industry, and not by any further direct charge on the miners themselves.

Another fear, shared by medical members of both political parties, is that the introduction of a Government department into what is really an intimate health circumstance, and a private matter between man and master, will make for difficulty because of the lack of the personal approach. How far this will be the case it is impossible to determine, but its potential significance should be appreciated. It is generally accepted that Government departments tend to slowness of action and anonymous hard-heartedness; there is often a lack of the human touch in dealings with the ordinary citizen, which in this scheme will be so vitally important. The Minister of National Insurance has therefore a serious responsibility in seeing that officialdom is not exploited at the expense of the injured worker. This fear is appreciated by others, for here is an extract from a recent report on resettlement by P E P.

> "Although Government departments realize the need for a truly human relation between their officers and the individual, very little progress has been made towards achieving it. Yet some means must be found of breaking down the subhumanity of Authority if we are to avoid a reaction against official rigidities which will land us in individualist anarchy."

There is need, therefore, for those members of the new Ministry who are to deal with the human problem of compensation for injury—the insurance officers—not only to be carefully selected on personality grounds as well as technical, but to be given wider social training by, among other agencies, University Departments of Industrial Health. This is necessary because their duties will bring them into daily contact with sick and injured workers, industrial managers, and hospital staffs. They will have powers to settle claims, perhaps after difficult interviews with relatives—widows, for example; powers to refer an individual man or woman to medical boards; and powers to require workers to submit themselves to medical examination, to undergo "appropriate" medical treatment, or to attend vocational training or industrial rehabilitation courses provided under the Disabled Persons (Employment) Act. The insurance officer now becomes a member of the rehabilitation team, for his influence over the injured worker—for better or for worse—will obviously be considerable.

Medical Certification

While the words "arising out of and in the course of," used at present to define an accident where benefit is paid, are not to be changed, a modification in favour of the workman is now proposed to the extent that "an accident arising in the course of an insured person's employment shall be deemed, in the absence of evidence to the contrary, also to have arisen out of that employment." This will have repercussions, for example, in cases of dermatitis and hernia. The medical profession have at present much certification for fitness or unfitness for different jobs. This obligation must obviously still continue—and possibly in greater amount—as the only person able in law to assess capacity for work is the doctor. Some method may have to be evolved (and this may be the view of the Minister) to make certification more accurate and based on a better appreciation of the physical and mental requirements of different jobs. In this respect further research is necessary into problems such as job-analysis in respect of capacity for work,¶ and methods whereby information regarding patients can be passed from one doctor to another in the different branches of medicine. In the new legislation the fact that the system of contracting out through insurance companies is to be abolished will eliminate the need for reports to those companies, but it is obvious that the Ministry of National Insurance will demand written evidence from doctors no less than under the old scheme.

Effects on the National Health Service

Some of the demands which will be made by the new Ministry will affect the medical profession as follows:

Effect on Hospitals

For the purposes of the Act "medical treatment" means "medical, surgical, and rehabilitative treatment, including course of diet

¶ It is suggested that this be termed "job-selection analysis," which would become, in part, a responsibility of medicine. Job-analysis, on the other hand, is the primary responsibility of industrial management.

or other regimen." The Bill goes on to use the phrases "approved hospital treatment" and medical treatment given "with the approval of the Minister." Regulations may also provide for determining "in what cases" and "for what periods" treatment is to be carried out. Is there therefore to be some selective method of treatment? Are some hospitals not to be approved? Who, on behalf of the Ministry, will advise approval or disapproval? Will hospitals with inadequate facilities for accident treatment remain outside the scheme? Will the Industrial Injuries Fund itself contribute to the treatment of patients? The time is obviously now opportune for a scheme to be prepared in detail for an accident treatment service for the country, and for a more critical survey of the accident-treatment facilities in different areas than those already carried out.

The Minister can arrange with the Minister of Labour that persons entitled to benefits under the Act are to take full advantage of "industrial rehabilitation courses" under the Disabled Persons (Employment) Act. Does this mean that he would have the power to remove a person under treatment by a certain physician or surgeon to a course or centre where he would come under other care and supervision? Who will advise him in such cases? Are the Ministry of National Insurance, the Ministry of Labour, the Ministry of Fuel and Power, the Ministry of Pensions, and the Ministry of Health—presumably the body to be responsible for the new national health service—still to operate independently in respect of rehabilitation? In the interest of the patient there appears to be good reason for better integration of rehabilitation services, and this should become a responsibility of hospital administration in the new health service.

Medical Boards and Appeal Tribunals

The Bill states that medical boards and appeal tribunals are to be set up. The boards are to decide whether an injury has resulted "in the loss of a faculty," whether this loss is permanent, and at what stage of treatment the extent of disablement is to be assessed. It has already been noted that insurance companies are to disappear from workmen's compensation, and this means that individual doctors will no longer act in an advisory capacity to them in this connexion. The new legislation, and in particular the setting up of these boards, may have unfortunate repercussions, therefore, on the income of certain doctors, but it cannot fail to be a great improvement on the present state of affairs. The medical boards will be appointed by the Ministry, and will consist of two or more medical practitioners, one of whom shall be chairman. It has been suggested—and the Bill evidently allows for this—that the Ministry of Pensions may take this over. What then are the implications? Although the Ministry of Pensions doctors are no doubt able assessors of incapacity states relative to fixed standards, are they sufficiently skilled in the question of disablement *vis-à-vis* work? (It may be argued, however, that this particular skill is not necessary under the new scheme.) Has this Ministry got adequate staff, or will it have to increase its staff still further? Should special training facilities be provided for the doctors who will serve on these boards? What links will the Boards have with hospitals, disablement rehabilitation officers, local industries, industrial medical officers, and general practitioners?

Medical appeal tribunals will also be appointed by the Minister and will consist of two medical practitioners and a chairman, who does not need to be a doctor but can be the chairman also of a local appeal tribunal. What doctors are to do this work, and what training and experience are necessary? Are they to be whole-time? Is the Ministry of Pensions also going to take this over?

The amount of work to be done by boards and appeal tribunals is difficult to assess, but in a busy industrial area, and certainly at the beginning of the scheme, their task will not be easy. Employers may dispute more claims for disablement benefit than they have in the past, but disputes may diminish when it is appreciated that the new Act favours the worker in respect of claims. It has already been observed that workers will soon know that more benefit is paid if the injury occurred at work, or under certain circumstances when going to or from work, than if it happened at home. Abuse is therefore possible.

"Single" Medical Practitioners

The Minister may, with the consent of the claimant for disablement benefit, refer the case, where disablement is likely to be less than three months, to a "single medical practitioner appointed by the Minister, instead of to a medical board." What are the implications of this? The Bill leaves room for further provisions and regulations to be made under this heading. There still would be the right of appeal to and review by boards and tribunals. These "single" doctors might be (*a*) surgical and medical specialists, (*b*) general practitioners, (*c*) industrial medical officers, or (*d*) members of the staff of the Ministry of Pensions.

One or more medical practitioners may sit with local appeal tribunals as members or assessors. These doctors will be appointed by the Minister. The Minister may also appoint "medical officers for the purposes of the regulations" concerning prescribed or occupational diseases. The Bill is, intentionally or otherwise, vague in this connexion (see Section 55 (3) (b)), but it may be reasonable to inquire further into the Minister's intention and to ask for more specific detail of these appointments.

The Industrial Medical Officer

It is reasonable to suppose that a new industrial health service will eventually be set up to cover all occupations and be integrated with the new national health scheme, although the Minister of Health has clearly said that this will not take place at once (*B.M.J. Supplement*, 1946, **1**, 16). "The major task must be accomplished first, and after it is completed then the industrial health services must be looked at separately and assimilated into the health structure as a whole." Because of future developments this Bill should therefore be viewed from the angle of the industrial medical officer in a properly organized service; it will be seen at once that his help is necessary if the new legislation is to be fully implemented.

One of the important jobs which can well be carried out by the industrial medical officer (and, in fact, is being carried out now in a number of firms) is assessment of capacity for work, both of new applicants for employment and of workers returning after injury and illness. He is in a better position to do this than the hospital surgeon or physician, or the general practitioner; but assessment should ideally be made by team-work between the two: one has knowledge of the patient's general function following disability, the other has or should have knowledge of work, so that he can place the man into a suitable occupation. Placement at work after accident, provision of alternative work, supervision during these phases, close contact with hospitals, and supervision of "industrial rehabilitation" schemes envisaged in the Disabled Persons (Employment) Act are other matters which are his concern.

The extension of insurance to occupational diseases also closely affects the industrial medical officer. The diseases for which benefit will be paid are to be "prescribed." If the Government prescribes diseases other than those at present scheduled under the Workmen's Compensation Act it must provide evidence of a high scientific and technical order. The trade unions have insisted from time to time that other diseases should be scheduled, and production (or otherwise) of evidence in this respect may well form part of the work of research units attached to a national industrial health service.

It is a matter of interest that the Bill refers specifically to pneumoconiosis. Medical examinations are to be carried out in various groups of workers, and no doubt the present Silicosis Board will continue to operate, with, it is hoped, wider terms of reference. But will this Board come under the Ministry of National Insurance? Will it have increased powers—for example, such as those of factory inspectors? How far will industrial medical officers, appointed say to potteries and coal-mines, take part in the new pneumoconiosis scheme? Pneumoconiosis, for the purposes of the new Act, "means fibrosis of the lungs due to silica dust, asbestos dust, or other dust, and includes the condition of the lungs known as dust-reticulation." This raises a point of much importance, for dust-reticulation is found in certain apparently healthy foundry-workers, and among workers in factories where silicates are used—for example, in the ceramic industry. How far, in the new scheme, will these men be eligible for disability benefits and pension? Here is an example of the need for more adequate research facilities and a closer link between research and legislation.

Finally, the industrial medical officer will have a new opportunity to practise preventive medicine. The whole structure of the Bill depends for its financial success on the prevention of accidents. So the various ways in which the profession can contribute to this should be further explored by the Industrial Health Research Board or some other competent body. It is possible, in this connexion, that industrial managements may show lack of interest, thus impeding the doctor's work. This suggestion is based on the fact that there will be no reduction in the employer's contribution to the Industrial Injuries Fund even if the firm has a low accident rate; firms with high rates and those with low rates will make the same weekly payments. This is an important matter for discussion: what are to be the incentives to industry to reduce its accident rate?

Research

Section 72 of the amended Bill introduces a novel line of thought into an otherwise prosaic though stimulating document. "The Minister may promote research into the causes and incidence of, and methods of prevention of, accidents, injuries, and diseases against which persons are insured under this Act"; and he can employ research workers to work in his Department, or can contribute towards the expenses of other research workers. For economic and financial reasons this is an obvious corollary to the new legislation, and it raises important issues. How will this affect the policy of the Medical Research Council? Will the Industrial Health Research Board expand or will it continue as at present, understaffed and with inadequate

premises? Will the Ministry set up its own industrial medical research department? If so, from whence will come adequate staff? And who will advise the Minister in this direction? Are the problems at present being investigated by the Medical Research Council or its Industrial Health Research Board those of most importance in relation to the national economy; or should a better priority be determined?

It may be relevant to inquire whether the general insurance scheme against ordinary illness should also empower the Minister to carry out research, so that by its application sick absence could be prevented and costs to the country reduced. This seems a logical sequence, and the amounts of money so directed could well be proportionately greater. So far, nothing to this effect has been proposed. But if it were to be specifically included the impact on present medical teaching and research would, to say the least of it, be stimulating.

There are few statistics available to-day concerning accidents among the civilian population, apart from certain facts given by the Chief Inspector of Factories in his annual reports. We have seen, however, that in the last pre-war year some 460,000 persons received £6¼ million in compensation among the seven great industries; but these figures have financial significance only, and are of little value to the medical or social research worker. If the Minister institutes research into the incidence of injuries and industrial injuries on any adequate scale he will find it necessary to create a national health statistical department either within his own Ministry or in collaboration with the Minister of Health. He should have no difficulty in financing this, for his Industrial Injuries Fund will have an annual income, under stabilized conditions, of at least £23 million. It may well be that the Minister will have to spend £1 million a year on research if he wishes later to save £2 million or more. Has the Medical Research Council, or any other branch or department of medicine for that matter, given this matter thought? It is more than possible that, because of the large sums of money involved, we are entering a new era of applied medical research, for which the present machinery is inadequate to meet the demands of a modern State.

Medical Advisory Committee: A Recommendation

There are signs on many grounds, therefore, that the work of the doctor *because* of the new scheme will increase rather than decrease; and *in* the new scheme he will play a supremely important part, whether in hospital, in industry, in general practice, in research, or as a member of boards, tribunals, or advisory councils. So for this reason the Rehabilitation Committee of the British Medical Association (during examination of the new Bill in relation to rehabilitation) has proposed (*B.M.J. Supplement*, 1945, **2**, 108) that, in addition to the Advisory Council to be set up by the Minister (see Section 60), there should be established a medical advisory committee composed entirely of doctors to advise the Minister on the many and varied medical problems which will arise. The assessment of prescribed industrial diseases should be the responsibility of this committee. The wisdom of this recommendation is obvious in the light of the various implications which have been discussed. Only thus can the contribution of the medical profession to this new and important social service have its full effect and be adequately co-ordinated.

The Ministry of Health has circulated to county councils, county borough councils, and joint cancer committees a valuable memorandum by Prof. Matthew Stewart, of Leeds, entitled "Notes on Conditions which may lead to a Provisional Diagnosis of Cancer but which Prove to be Non-malignant Histologically." This pamphlet, which runs to 14 pages, is a reprint from the *Monthly Bulletin of the Ministry of Health and the Emergency Public Health Laboratory Service*, January, 1946. It is intended primarily for the guidance of medical officers of health and others who may have to assess liability for payments under the Cancer Act; it will also be of service to pathologists and clinicians. The non-malignant conditions are grouped under (1) lesions of the skin, (2) lesions of the subcutaneous tissues, (3) breast lesions, (4) lips and tongue, (5) stomach and intestines, (6) lymphatic glands, (7) larynx, (8) lungs and bronchi, (9) salivary and lacrimal glands, (10) intracranial lesions, (11) tumours of bone, (12) adrenal tumours, (13) thyroid, (14) urinary tract lesions, (15) testicular tumours, (16) penis, (17) ovarian tumours, (18) uterus, (19) vagina, (20) vulva.

THIOURACIL IN THE TREATMENT OF THYROTOXICOSIS

FURTHER EXPERIENCES

BY

A. M. NUSSEY, M.D., M.R.C.P.

Physician to Selly Oak Hospital, Birmingham

A year or so ago a preliminary report on 27 thyrotoxic patients treated with thiouracil was published in this *Journal* (Nussey, 1944), and an account is now given of their subsequent course and of others who have since augmented the series. The total treated up to October, 1945, has risen to 53, but details are given here of only 50, the remaining 3 having been under observation for less than 6 weeks. In Table I the cases are grouped according to the length of time they have been observed.

TABLE I

	Period of Observation in Months								
	Over 24	21–24	18–21	15–18	12–15	9–12	6–9	3–6	1½–3
Number of cases	3	6	6	7	5	4	9	5	5

Of the patients 45 were females and 5 males, and their ages ranged from 19 to 72. The initial B.M.R. readings varied from +17 to +84, and, of those, 13 were under +30 and 18 over +50. Judged by the degree of thyrotoxicosis, they may be divided into: 9 very severe (including 7 with cardiac complications), 19 severe, 13 moderate, and 9 mild. More than half of the total number had a diffuse goitre, about a third had nodular thyroid, and, of the remainder, a few had scarcely any enlargement of the gland and 4 had had operations before. No attempt is made here to draw any distinction between primary and secondary thyrotoxicosis, because many of the patients were uncertain whether the thyrotoxic symptoms came on with or preceded the goitre; but as a general rule those with nodular goitres were somewhat slower in responding to thiouracil than those with the diffuse type.

Subsequent Course of the Cases Treated in 1944

It proved possible to follow the course of all 27 patients mentioned in the first paper, and a few details may be of interest. As before, the patients are referred to numerically in the order they presented themselves for treatment.

No. 1, who had treatment for a year, relapsed after five months without thiouracil, and had to have another course of it for 5½ months. It was possible to discontinue her treatment once more for another two months. No. 2 had to have treatment on and off for 21 months, but she has now remained well for three months without it. No. 3 was negligent in her attendance. She had thiouracil for two months at the end of 1943, for another two months at the end of 1944, and during April, 1945. When visited recently her condition was found to be fairly satisfactory. No. 5, who had psychopathic tendencies and a bad family history, proved uncooperative after leaving hospital and could not be relied on to continue the treatment at home. He relapsed into a state of severe thyrotoxicosis after an attack of sinusitis and developed an obsessional psychosis. He could not be persuaded to accept either medical or surgical treatment, and eventually had to be admitted to a mental hospital, where he died from exhaustion on June 3, 1945. No. 11 was missed for a whole year after a successful six-months course of treatment. She was able to work throughout, and now shows evidence of slight relapse (B.M.R. +31). No. 12, who had five months' treatment, and whose auricular fibrillation stopped spontaneously, had a slight recurrence of thyrotoxicosis and of fibrillation 11 months later, but both these conditions were easily restored to normal with another course of thiouracil and she now keeps fit on 0.05 g. daily. No. 14 has maintained a satisfactory condition and is still on a small dose of thiouracil. No. 18, although originally rather resistant to treatment, eventually did extremely well. When her treatment was stopped after a year her B.M.R. was still +31, but it continued to drop after that and reached normal level. This patient has now

remained well for a further five months. No. 21 remained well for 7½ months after a 4½-months course of thiouracil, but then had a slight recurrence. After another month's treatment she has remained well for a further four months. No. 24 had treatment for 2½ months only and then was lost sight of after she went back to Ireland for a time. She apparently remained well for four months and then suffered a relapse, for which she is now being treated. No. 26, after a year, still requires a small maintenance dose of thiouracil.

Those of the patients who remained well for a long period after a single course of thiouracil are grouped in Table II.

TABLE II

No.	Original Classification of Thyrotoxicosis	Length of Treatment	Length of Remission after leaving off Thiouracil
4	Severe	12 months	11 months
7	Mild	11 ,,	12 ,,
8	Moderate	5 ,,	17 ,,
9	Severe	10 ,,	12 ,,
10	,,	5 ,,	16 ,,
13	,,	5½ ,,	14 ,,
15	Mild	5 ,,	14 ,,
16	,,	5 ,,	13 ,,
17	Severe	12 ,,	6 ,,
18	Very severe	12 ,,	5 ,,
19	Moderate	5½ ,,	10½ ,,
20	Mild	5 ,,	11 ,,
22	Severe	4½ ,,	10½ ,,
23	,,	4½ ,,	10 ,,
25	Moderate	3 ,,	12 ,,
27	Severe	4 ,,	8 ,,

Cases Treated since 1944

Among the patients dealt with in the last 12 months there are 6 in whom it was judged possible to leave off the thiouracil after treatment lasting four to six months. In these cases no relapse has followed, so far, for periods of six weeks to 3½ months. In almost all the others control of thyrotoxicosis was achieved by means of continuous treatment lasting from six weeks to eight months, and they are mostly on a maintenance dose of 0.05 g. of thiouracil twice daily. The following other patients have to be mentioned.

A woman of 44 (No. 29), with an initial B.M.R. of +53, had a very active thyroid, exophthalmos, congestive heart failure, and auricular fibrillation. During a four-months stay in hospital her heart rhythm was restored to normal with quinidine, but relapsed, and then went back to normal again on further treatment with thiouracil alone. She is still on 0.05 g. of thiouracil thrice daily, and although the B.M.R. has dropped only to +31 she feels well and has been able to do light work for the last three months. Another woman of 44 (No. 32) had an initial B.M.R. of +84, gross congestive failure, and uncontrolled auricular fibrillation. She improved markedly with thiouracil, and although her B.M.R. remains in the region of +40 and her auricular fibrillation persists, she is now able to earn a living by doing light work. A man (No. 33) aged 44 had two partial thyroidectomies—the second, on Jan. 15, 1944, being followed by collapse, congestive failure, 2 : 1 heart-block, and, later, auricular fibrillation. He pulled up slowly, and when put on thiouracil two months after the second operation his B.M.R. was still +53. Since then his normal rhythm has returned and he put on 3 st. (19 kg.) in weight. He is now on 0.05 g. of thiouracil daily. A woman of 31 (No. 34) with severe thyrotoxicosis showed almost complete absence of deep reflexes when first seen in the out-patient department. She responded rapidly to thiouracil treatment, but in the course of it complained of tightness in the legs, tingling in the fingers and toes, and difficulty in walking uphill. What little she had of her deep reflexes disappeared, and she also had slight swelling of the feet. Her treatment was stopped after four months, and she has remained well for another four months. The swelling of the feet subsided quickly, and so did the subjective feelings, but her deep reflexes are still absent. It seems almost certain that this patient was on the point of developing a polyneuritis before she had any thiouracil. A woman aged 40 (No. 35) was on thiouracil for 11 days when she developed severe faucial and tracheo-bronchial diphtheria, to which she succumbed. When this patient contracted diphtheria there was an outbreak of streptococcal sore throats in the ward, but it is difficult to say whether this acted as an exciting cause. Her white cell count was not depressed at any time, and two days before her death stood at 27,000 with 78% polymorphs. A woman of 65 (No. 40) with severe thyrotoxicosis and mild diabetes responded well to thiouracil. Her two glucose-tolerance curves—one taken before treatment, and the other after three months on thiouracil only—showed no appreciable difference.

A woman aged 59 (No. 47) was admitted with very severe thyrotoxicosis ; shortly after thiouracil was started she developed a bright-red papular eruption on her hands and forearms. This rash faded without stopping treatment, but after 25 days she had a precipitous fall of the white cell count, affecting chiefly the granulocytes. Injection of liver and pentnucleotide, and yeast and marmite orally, did not seem capable of arresting the fall, but she responded dramatically to 100 mg. of pyridoxine intravenously, given on two consecutive days. An attempt to restart thiouracil brought on a further depression in the white cell count, and the treatment was finally stopped. The accompanying Chart shows the sequence of events, and the slow

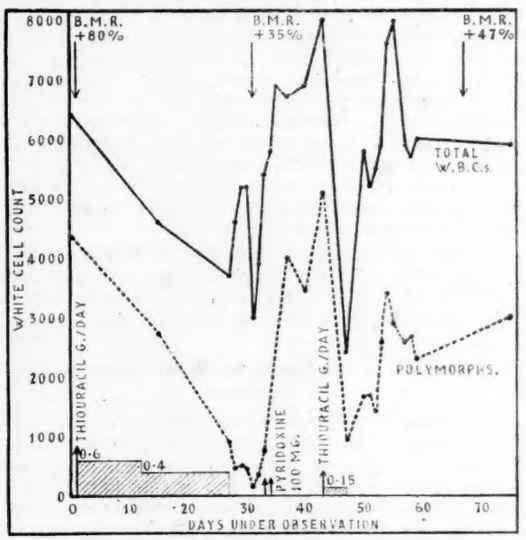

Chart of Case 47

recovery after the second course of thiouracil without any special measures. The patient, who suffered neither systemic nor local disturbances due to the granulocytopenia, was not willing to have an operation, and left hospital in an improved condition.

Besides the complications already mentioned there were a few others which were transient and did not interfere with continued treatment. Thus, 4 patients in the first series (Nussey, 1944) had macular rashes, chiefly on exposed parts of the body ; among the more recent cases, one (No. 29) had enlargement of the parotid glands and another (No. 48) enlargement of the left submaxillary gland, while in yet another (No. 46) a dental abscess seems to have become activated during treatment.

The general plan of treatment of thyrotoxicosis with thiouracil remained substantially the same as in 1944, though there has been a tendency to reduce the initial dose of 0.2 g. thrice daily or 0.1 g. four times daily rather more quickly than before. All the patients were still asked to enter hospital for the first two or three weeks of their treatment or, exceptionally, for a longer time where such a complication as congestive heart failure was present. After leaving hospital, patients were seen at two-, then three-, and finally four-weekly intervals. Where it was possible to omit thiouracil they attended once every two or three months only. In three instances where the patient found it difficult to leave home out-patient treatment proved to be satisfactory.

There was the same insistence to rely on thiouracil to the exclusion of other drugs, with the exception of iron when hypochromic anaemia was also present, or of digitalis and mercurial diuretics for those with congestive heart failure. Th-

latter complication was the only one for which the patients in hospital were strictly confined to bed, all others being allowed to get up and about. In a few instances in which the white cell counts were bordering on leucopenia intramuscular injections of liver extract were given.

In regulating the treatment chief reliance was placed on close clinical observation, and no special laboratory investigations were carried out apart from regular white cell counts and fairly frequent B.M.R. estimations. Once the patients returned to a reasonably normal state a B.M.R. was done only when the clinical condition indicated that such a check-up was desirable. On several occasions the initial white cell counts were low, and these usually rose with the thiouracil treatment, whereas in the majority who had a normal initial count there was frequently a moderate drop in the first 7 to 10 days. There was one case, already described, of almost complete agranulocytosis. All the B.M.R. estimations were done in hospital after 16 to 20 hours' rest in bed. The circumference of each patient's neck, though admittedly a rather crude measurement, was carefully checked at each visit, and served as a useful guide in the treatment. Among the early cases there were 4 who temporarily developed considerable enlargement of the thyroid, presumably because of overdosage, but this has not been observed among the last 39 patients. Most times there has been a slight increase in the circumference of the neck, often due, at least in part, to the patient's gain in weight, and only rarely was there a very moderate reduction in the size of the neck. The staring expression, as pointed out before, disappeared in nearly every case, but the exophthalmos present in a few patients was little affected, with the exception of one (No. 46) in whom it was unilateral and became less with treatment.

To sum up, while the treatment of thyrotoxicosis with thiouracil provided a few disappointments and some anxious moments it may, on the whole, be regarded as having been worth while, and as having justified an extended trial.

Discussion of the Present Status of Treatment with Thiouracil

It will generally be found that, given the choice, patients with thyrotoxicosis will decline surgery and choose medical treatment, even after being warned of its protracted course and possible dangers. They are not, however, in a position to compare fairly the two forms of treatment, and have a right to look to us for guidance. The question therefore is, Can we now, in the light of results obtained by surgery on one hand and thiouracil on the other, formulate a definite opinion? Cookson (1945), who went into the matter, found that the mortality figures for subtotal thyroidectomy varied from 4.25% (Lahey and Hurxthal, 1934) to 2.6% (Dunhill, 1937) and 0.7% (Hudson, for his 582 unpublished cases, 1945). The figure of 2.4% in 2,094 cases given by Morley (1944) may perhaps be regarded as a fair average for those expert in the operation. On the other side, deaths due to thiouracil and caused chiefly by agranulocytosis are well under 1% of the approximately 1,000 cases so far published. After operation the surgeon may occasionally have his anxious moments, because of such mishaps as injury to recurrent laryngeal nerves or parathyroids, and because of bleeding or interstitial emphysema, but generally his responsibility ends with convalescence, whereas the physician who uses thiouracil has to be constantly on the look out for toxic manifestations, and is consequently obliged to see the patient fairly frequently and over a prolonged period. The fact, too, that those treated with thiouracil may come up complaining of symptoms for which the drug is in no way to blame may lead to a certain degree of impatience or prejudice on the part of the doctor; but, while it is right to expect loyal co-operation from the patient, it is essential that those who prescribe thiouracil should give the treatment the attention it requires. So far the morbidity resulting from thiouracil, averaging as it does about 10%, is certainly greater than that following operation. Some of the toxic reactions, like enlargement of salivary glands, certain of the rashes, headaches, and swelling of feet, may subside without more than a modification of the dose or a change to methyl thiouracil, but others, like fever, severe leucopenia, persistent nausea or vomiting, and some urticarial eruptions, may call for abandoning the treatment, especially if the same thing happens after the drug was stopped and started again.

Surgery may result in permanent myxoedema, whereas the myxoedema-like state due to thiouracil is a reversible condition, and is unlikely to occur to any extent on the smaller doses now being used. Thyrotoxicosis may recur after subtotal thyroidectomy—Crile and his associates (1932) give the figure as 3.03%—and this is brought clearly to light by the fact that about 10% of nearly every series of thiouracil-treated cases is composed of those who had a recurrence after one or more operations. Thiouracil does not, so far, hold out a certainty of complete remission within a given period of time, but we may be encouraged in our efforts to keep down the excessive production of thyroid hormone by the knowledge of the natural history of thyrotoxicosis with its not infrequent tendency towards regression, and by the mounting numbers of those who suffered no recurrence for long periods after their treatment. As a rule thiouracil can be safely resumed in those who have a relapse.

There is also no doubt that the existence of a medical remedy capable of alleviating their symptoms is bringing to light many sufferers who previously put up with their disabilities rather than face an operation, or who have continued to cling to iodine, which for one fleeting period gave them a glimpse of what it feels like to be well again. No case of thyrotoxicosis, however old or ill, need be denied an opportunity of thiouracil treatment. Convalescence after operation is often long, whereas with thiouracil return to work is much quicker; but here the position may be equalized with the adoption of thiouracil as a preoperative agent. Cosmetically the results of surgery are usually pleasing, whereas with thiouracil the prospect of reducing the size of the goitre is slight, and so in large and unsightly goitres, especially those causing pressure symptoms, operation is favoured.

It will take some time before the foregoing points can be fully assessed, but in the meantime medical use of thiouracil seems to offer an effective alternative to surgery.

The advent of thiouracil has also stimulated a good deal of thought and research into the subject of Graves's disease, and has reopened widely a subject about which the mastery of surgery may have made us rather complacent. From this something may emerge which will be less of a palliative measure and will replace both operation and thiouracil.

Summary

A record is given of 50 unselected cases of thyrotoxicosis treated with thiouracil.

An attempt is made to assess the present status of thiouracil in the treatment of thyrotoxicosis.

Grateful thanks are due to my colleagues who continued to refer to me their patients with thyrotoxicosis; to our biochemist, F. Morton, M.Sc., F.R.I.C., for carrying out the B.M.R. estimations and for his helpful criticisms; and to the staff of the pathological department for doing the white cell counts.

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The Ministry of Labour and National Service announces that, by a decision of the National Joint Council for the Staff of Hospitals and Allied Institutions in England and Wales, a new scale of minimum rates of wages, graduated according to the occupation of the workers, has been laid down for hospital domestic workers, to take effect from April 1, 1946. The rates embodied in this agreement are national minima. They are to be considered by eleven provincial joint councils set up for the various regions, which will have power to recommend the application of higher minimum rates or better conditions of employment in their areas. These rates are also to be the basic minima for the domestic staffs of mental hospitals. A special committee of the National Joint Council is, however, to consider whether higher rates should be prescribed for workers in those hospitals, for general application without regional variations. The agreement now announced applies only to England and Wales. A separate National Joint Committee for Domestic Staffs in Hospitals in Scotland is negotiating rates for the Scottish hospitals.

OUT-PATIENT TREATMENT OF EARLY SYPHILIS WITH PENICILLIN

A SURVEY OF 215 CASES TREATED BY SINGLE DAILY INJECTIONS

BY

T. R. LLOYD-JONES, M.R.C.S.
Surg. Capt., R.N.; Consultant in Venereal Diseases

S. J. ALLEN, M.D.
Surg. Lieut.-Cmdr., R.N.V.R.

AND

E. M. DONALDSON, M.B., D.P.H.
Surg. Lieut.-Cmdr., R.N.V.R.

Penicillin treatment of syphilis now ranks as one of the great medical advances of the war; the saving of man-hours already achieved has justified its adoption for the routine treatment of early syphilis in the armed Forces, although the end-results have yet to be evaluated. The original plans of treatment, which aim at the maintenance of relatively constant levels of penicillin in the blood over an arbitrary minimum period of 8 days, provide the basis for the majority of treatment schedules in current use. Such treatment, calling as it does for frequently repeated intramuscular injections, necessitates admission of the patient to hospital.

When penicillin became available for the treatment of syphilis in the Royal Navy it was considered important to evolve as quickly as possible an ambulatory method which would be applicable to the majority of patients in widely scattered ships and establishments. With this end in view an investigation was inaugurated in June, 1944; and in March, 1945, a preliminary report was made by one of us (T. R. L.-J.) in the form of an address to the Medical Society for the Study of Venereal Diseases. Two series of cases were described, the results of an ambulatory method calling for single daily intravenous injections comparing favourably with those of a multiple (three-hourly) injection method on conventional lines.

The present contribution reports the condition of the 100 cases originally treated (Lloyd-Jones and Maitland, 1945) after further observation, and describes an additional series of 150 cases treated by daily intramuscular injections and investigations directed to defining time–dose relationships. It is not considered useful at the present time to submit detailed clinical and statistical reports on this material.

Scheme of Investigation*

The results previously obtained with daily intravenous injections supported the view that a constant level of penicillin in the blood stream was not a necessary condition for cure. We felt encouraged, therefore, to continue our work on intermittent penicillin therapy and, on the suggestion of Prof. Sir Alexander Fleming, decided to treat a series of cases by daily intramuscular injections. In order to secure a basis for comparison with previous series we restricted treatment to cases of freshly acquired syphilis—primary or secondary. For the purpose of description we refer to primary cases of syphilis as "early," "middle," or "late": the early cases being those which remain sero-negative throughout; the middle primary cases those which are sero-negative at the start of treatment, show a short positive phase, and return to negative about the end of treatment; and the late primary cases those which are sero-positive at the outset (Lloyd-Jones and Maitland, 1943).

On the assumption that the total amount of treatment required for "cure" is related to the age of a syphilitic infection, we proceeded to modify the time–dose relationship within these categories, in the light of results observed as the investigation progressed. The manipulation of the separate factors involved will be apparent as the various series are discussed. Under Service conditions it was not felt justifiable to adhere strictly to a predetermined dosage scheme as would be done in a controlled experiment: the interest of the individual demanded modification of the schemes as relapses occurred. Later we carried the investigation to its logical conclusion by progressively decreasing the number of days' treatment, the total dose of penicillin remaining approximately constant.

* American commercial brands of sodium penicillin were used throughout.

Management of Cases

All cases here reported have had a minimum of three months' surveillance; several have been observed for periods up to fifteen months. Routine surveillance comprises weekly clinical examinations and quantitative Kolmer-Wassermann tests until sero-negativity has been attained or, in cases originally sero-negative, over a period of three to four months after treatment. Thereafter monthly examinations and blood tests are carried out. Cerebrospinal fluid examinations are made at the beginning of treatment and at the end of four months. So far as is possible cases are retained under our personal supervision until after the second cerebrospinal fluid examination.

Clinical Results

Immediate response was similar with all schemes of treatment—spirochaetes disappearing, lesions healing, and reversal of serology occurring within the same time limits. It is worthy of note that spirochaetes disappeared from surface lesions in the average time of nine hours after single injections ranging from 160,000 to 6,000,000 units. Sero-relapse occurred in five cases; all other relapses shown in the tables are examples of early infectious relapse, occurring as a rule between two and four months after treatment.

It should be realized that it is not our purpose to enlarge on detailed clinical results, pending the evolution of a fixed dosage scheme and its clinical trial on a larger number of cases. Furthermore, final evaluation must obviously await the passage of the years.

First Series (Three-hourly Intramuscular Method).—Table I brings up to date the previous report on the original series of 35 cases treated in 1944 and requires no further comment.

TABLE I.—*Series Treated by Three-hourly Intramuscular Injections*

No. of Cases	Total Dose of Penicillin	Method	Relapses
4	1·2 mega units	15,000 × 3-hourly	Nil
4	1·6 ,, ,,	20,000 ,, ,,	,,
27	2·4 ,, ,,	40,000 ,, ,,	,,
Surveillance	More than 1 year		9 cases
	,, 9 months		11 ,,
	,, 6 ,,		12 ,,
	,, 3 ,,		3 ,,

Second Series (Daily Intravenous Method).—The second series comprises the cases already reported (Lloyd-Jones and Maitland, 1945) with the addition of cases which have now fulfilled surveillance requirements. Results are shown in Table II.

TABLE II.—*Series (102 Cases) Treated by Single Daily Intravenous Injections*

No. of Cases	Category	Daily Dose of Penicillin in Units (Single Injection)	No. of Days' Treatment	Total Amount of Penicillin given in Mega Units	Relapses
9	Early primary	300,000	8	2·4	1
3	Early primary	300,000	10	3·0	Nil
3	Middle primary	300,000	8	2·4	,,
4	Middle primary	300,000	10	3·0	,,
1	Middle primary	300,000	13	3·9	,,
14	Late primary	300,000	8	2·4	2
9	Late primary	300,000	10	3·0	Nil
2	Late primary	300,000	11	3·3	,,
17	Late primary	300,000	13	3·9	1
3	Secondary	300,000	8	2·4	Nil
3	Secondary	300,000	10	3·0	1
10	Secondary	300,000	13	3·9	2
78					7 (9 %)
3	Early primary	500,000	5	2·5	Nil
2	Early primary	500,000	7	3·5	,,
1	Middle primary	500,000	7	3·5	,,
1	Middle primary	500,000	10	5·0	,,
1	Middle primary	500,000	5	2·5	1
1	Late primary	500,000	7	3·5	Nil
3	Late primary	500,000	8	4·0	,,
7	Late primary	500,000	10	5·0	,,
1	Secondary	500,000	7	3·5	,,
4	Secondary	500,000	10	5·0	,,
24					1 (4·2%)
Surveillance	More than 10 months				19 cases
	,, 8 ,,				38 ,,
	,, 6 ,,				21 ,,
	,, 3 ,,				24 ,,

In order to provide a basis for comparison with the conventional three-hourly intramuscular method employed in the first series it was decided to administer the same total dosage of penicillin (2,400,000 units) over the same time-period (eight days). This necessitated a single daily injection of 300,000 units. The total dosage was then increased in the light of results observed as the series progressed, but as the daily injection was kept constant it was spread over a greater number of days. To offset this increase in time-spread the daily injection was increased to 500,000 units in the later cases. Table II indicates that results remained satisfactory when the time under treatment was reduced in this way, and the larger daily injection offers obvious advantages in the smaller number of injections required to complete treatment.

Third Series (Daily Intramuscular Method).—Table III summarizes the results in this, the third series treated.

TABLE III.—*Series (113 Cases) Treated by Single Daily Intramuscular Injections*

No. of Cases	Category	Daily Dose of Penicillin in Units (Single Injection)	No. of Days' Treatment	Total Amount of Penicillin given in Mega Units	Relapses
24	Early primary	300,000	8	2·4	1
7	Early primary	300,000	10	3·0	Nil
5	Early primary	300,000	8	2·4	,,
5	Middle primary	300,000	10	3·0	1
1	Middle primary	300,000	13	3·9	Nil
2	Late primary	300,000	10	3·0	,,
38	Late primary	300,000	13	3·9	,,
18	Secondary	300,000	13	3·9	4
9	Secondary	300,000	15	4·5	Nil
109					6 (5·5%)
1	Middle primary	500,000	8	4·0	Nil
3	Late primary	500,000	8	4·0	,,
4					Nil

Surveillance .. .. More than 7 months .. .. 14 cases; ,, 5 ,, ... 47 ,, ; ,, 3 ,, ... 52 ,,

On the basis of the results shown in the tables we tentatively suggest as minimum dosage schemes for these methods:

300,000 *Unit Dose*

Primary	Early ..	10 single daily injections of 300,000 units =	3·0 mega units
	Middle ..	12 ,, ,, ,, ,, =	3·6 ,,
	Late ..	13 ,, ,, ,, ,, =	3·9 ,,
Secondary		15 ,, ,, ,, ,, =	4·5 ,,

From the point of view of treatment the separation of cases into categories can no longer be regarded as essential, and when facilities for frequent quantitative serological tests are not available, early, middle, and late primary may be regarded as a single group—primary syphilis—and given the dosage recommended for the late primary group.

500,000 *Unit Dose*

Primary syphilis: 8 daily injections of 500,000 units, giving a total dosage of 4 mega units.
Secondary syphilis: 10 daily injections of 500,000 units, giving a total dosage of 5 mega units.

This method has now been temporarily adopted for routine use, but to date only a few cases satisfy our surveillance requirements.

Technique.—The unitage of penicillin required was dissolved in 2–3 ml. of sterile water and injected intramuscularly into the buttock. The injection was repeated daily, alternating between the left and right sides, until the total dosage had been given.

TABLE IV.—*Intensive Treatment (30 Cases)*

No. of Cases	Individual Dose of Penicillin	Total Amount of Penicillin given	Time-spread of Treatment	No. of Relapses	Average Time to Relapse	Relapses (%)
6	1 mega unit	5 mega units	5 days	3	10 wks.	50
10	1 ,, ,,	4 ,, ,,	4 ,,	5	7.2 ,,	50
2	1 ,, ,,	3 ,, ,,	3 ,,	1	8 ,,	50
4	Variable, up to 3 mega units	5 ,, ,,	2 ,,	3	10 ,,	75
4	Variable, up to 3 mega units	5 ,, ,,	Up to 3 hrs.	4	5·7 ,,	100
1	Variable, up to 3 mega units	7 ,, ,,	3 hrs.	1	8 ,,	100
3	5 mega units	5 ,, ,,	1 injec.	3	4·1 ,,	100

No reaction of any moment was seen and in no case did treatment have to be interrupted or suspended. Primary reactions following the first injection did occur, but constituted no bar to out-patient treatment.

In view of the encouraging results in the earlier series we decided to investigate further the time–dose relationship by progressively decreasing the time-spread while keeping the total dosage at or above the amount we regarded as curative in the previous series. These were cases of primary syphilis, and all were kept under strict supervision, with careful examination bi-weekly. It is evident from Table IV that a dose (5 mega units) which would be curative when spread over ten days, as in the third series, already described, is inconsistent in its results when this time-spread is reduced to five days or less. Moreover, there is a suggestion that as the period of treatment is reduced the relapses tend to occur at shorter intervals after treatment.

These results may be compared with those of Lourie *et al.* (1945), who have reported three cases given six doses of 200,000 units daily for two days—a total of 2.4 mega units—with ineffective results; and a further two cases of secondary syphilis treated for four days—one with 4.8 mega units, the other with 9.6 mega units—both with satisfactory results. They have also treated 17 cases with a total dosage of 9 mega units spread over five days, and all have so far proved highly successful.

Syphilis Acquired Concomitantly with Gonorrhoea

Ten patients apparently contracted syphilis at the time they were infected with gonorrhoea. All had been treated with penicillin for the latter disease—one case receiving 800,000 units (single injection), another 300,000 units (single injection), the remainder 150,000 units in five injections of 30,000 units. All developed primary lesions within the limits regarded as normal for the incubation period of syphilis. It is interesting to note that in none of these cases had the relatively high doses employed in any sense "masked" syphilis.

Neurosyphilis

Only cases of early syphilis have been reported above, but in addition to these we have treated 10 cases of "asymptomatic neurosyphilis" by single daily injections until a total dosage varying from 2.4 to 5 mega units had been administered. The cerebrospinal fluid of four of these cases reverted to normal within six weeks, and although the cerebrospinal fluid of the remaining six has shown definite improvement, mainly in cell content and globulin and protein estimations, they have not become normal so far.

Penetration of Penicillin to the C.S.F.—An interesting sidelight on the above results is provided by the report of Lourie *et al.* (1945), who demonstrated small amounts of penicillin in the cerebrospinal fluid of the rabbit and of man after relatively large parenteral injections. We have carried out three similar experiments on cases of primary syphilis with no signs of meningitis: (1) a patient to whom we gave a single dose of five million units intramuscularly showed no trace of penicillin in the cerebrospinal fluid at one or at two hours after the injection; (2) a patient to whom we gave a single dose of six million units intramuscularly showed no trace of penicillin at three hours, but at four hours a slight amount was present; (3) a patient to whom a single dose of six million units was given intramuscularly showed a penicillin concentration of 0.125 unit per ml. at five hours and also the same amount—0.125 unit per ml.—at six hours after injection. These results suggest that higher dosages of penicillin than those hitherto employed may be given with advantage to cases of neurosyphilis. They also lend support to the plea (Ross *et al.*, 1944; Lourie *et al.*, 1945) for the routine use of larger doses in all forms of syphilis.

Discussion

We have described methods of treatment for early syphilis suitable for use in out-patients. These are based on the hypothesis that a sustained and relatively constant blood level of penicillin is not a necessary condition for cure. When the investigations were started no laboratory evidence was available to confirm or refute this hypothesis, but the recent work of Lourie *et al.* (1945) may now be cited in its favour. Working *in vitro* with *Spirochaeta recurrentis*, they found that 99% of the

organisms were rendered non-viable in eight hours by a penicillin concentration of 0.62 unit per ml., and that with higher concentrations the same effect was produced in a shorter time—e.g., in a concentration of 10 units per ml. 99% were non-viable after two hours.

Optimum time-dose relationship has always been a crucial factor in the chemotherapy of syphilis. There is as yet no agreement on the optimum relationship in the case of penicillin, but we believe we have made some contribution to the eventual solution of this problem, our results indicating that a time-spread of five days or less is inadequate even with our relatively enormous total doses.

However, as penicillin becomes more abundant it seems desirable that routine dosage should greatly exceed minimum requirements, especially as there appears to be little danger of overdosage. The low incidence of primary reactions following initiation of treatment in our cases is in accord with the experience of Lourie *et al.* (1945). Indeed, it seems that the higher the initial dose the fewer and less severe are the reactions following it; this observation may have important applications in the management of cases in which it is imperative to minimize therapeutic shock effects.

We have not investigated the possible advantages of combined penicillin and arsenic or bismuth therapy, as it appeared to us desirable first to determine the results to be expected with penicillin alone.

Results with our scheme of "intermittent penicillin therapy" have been encouraging, but are not intended for direct comparison with those reported for multiple-injection methods by other workers. Such comparisons must await the results of large-scale trials, which we believe are now justified, and in fact daily-injection methods have now been approved for more general use in the Royal Navy.

Although sodium penicillin has been used throughout this work, we have to state that calcium penicillin, made available to us by Surg. Cmdr. C. A. Green, R.N.V.R. (R.N. Medical School, Clevedon), is now under investigation; results to date compare favourably with those reported above for the sodium salt.

Summary

An out-patient scheme for the treatment of early syphilis with sodium penicillin, supported by a report on 215 cases, is presented.

The system of treatment consists of daily injections of an aqueous solution, and is based on the hypothesis that a continuous level of penicillin in the blood stream is not a necessary condition for cure. Intravenous and intramuscular routes are equally effective, but the latter is preferred on grounds of convenience.

Investigations relative to time-dose relationships are reported.

Penicillin has been demonstrated in the cerebrospinal fluid, in the absence of meningitis, following parenteral injection.

Our thanks are due to Sir Sheldon Dudley, Medical Director-General of the Navy, for his encouragement and for permission to publish this paper; to Sir Alexander Fleming for his interest; to Sick Berth Chief Petty Officers T. Jones and J. Nuttall and Sick Berth Petty Officer S. K. Hunter for help in the laboratory; and to Sick Berth Chief Petty Officer L. Rickard and the Sick Berth staff for their assistance in the clinical work.

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In Poland, as in all liberated countries, professional men are eagerly demanding opportunities to catch up with the lost years, to make good the blanks in professional studies caused by the Nazi occupation. In particular, doctors are impatient to receive information about the advances made by medical science during the years 1939–46. To meet this demand, Dr. Wilbur Sawyer, Chief of U.N.R.R.A. Health Division in Washington, made a tour of Poland last autumn, lecturing on influenza, yellow fever, and insect vector control. His tour was so successful that U.N.R.R.A. has sent further specialists in different branches of medicine to make a similar tour. From Britain Dr. N. H. Martin has lectured on nutrition, and Dr. Marc Daniels is giving a series of lectures on tuberculosis and is also making a tuberculosis survey of Poland. Another American, Dr. Nevitt, has instructed Polish doctors on the latest technique of plastics in dentistry. Russian authorities on physiology and tuberculosis will probably visit Poland in the near future.

A CASE OF PERIARTERITIS NODOSA

THE ROLE OF ANAPHYLAXIS

BY

M. PERILMAN, M.D.Paris

Assistant Medical Officer, Archway Hospital (L.C.C.)

Periarteritis nodosa is a disease of obscure origin, rather rare but of great clinical and pathological interest. Only the severe forms can be recognized clinically, and recovery is relatively infrequent. The vessels affected are usually of the size of the hepatic artery or smaller. There is necrobiosis, followed by leucocytic infiltration, exudation, and subsequent development of granulation tissue. Some authors prefer the term "necrosing arteritis" to periarteritis nodosa, as the lesion is not always nodose. It is my intention to discuss a case in the light of the observations made by Rich (1942). I believe that every case of periarteritis nodosa deserves special attention, as it is often difficult to diagnose and as the study of the aetiology and pathogenesis of the disease (or perhaps it is better to say "syndrome") may throw more light on the obscure aetiology of certain other diseases, such as ulcerative colitis.

Case Report

Miss A., aged 42, was admitted to this hospital on Feb. 17, 1943, complaining of general malaise and pain in the joints preceded by a "rash" on both legs of three weeks' duration. With the exception of a chronic duodenal ulcer from which the patient was presumed to suffer, there was nothing of interest in her past history. On examination she looked ill and apathetic. The temperature was 102.6°, the tongue furred, the abdomen distended, and there were a few rales at the base of the right lung.

On Feb. 20 the patient developed an urticarial rash, which persisted for several days. She also complained of weakness and pain in the legs and had difficulty in moving the feet. A few days later the pain in the legs became rather severe, and the sluggish knee-jerks, together with the dropped feet, suggested peripheral neuritis of both legs.

On Feb. 25, seven days after admission, the patient suddenly complained of severe abdominal pain. The abdomen was tense and tender, the pulse rapid, perspiration was excessive, and she vomited rather copiously. Surgical intervention was discussed, but was postponed. She was much improved three days later. Her condition, nevertheless, seemed worse after a short time. The pyrexia persisted, as well as the neuritis. She became very wasted and incontinent of urine, and diarrhoea was a prominent feature.

The following investigations were carried out during her stay in hospital:—Blood count (Feb. 22): Red blood corpuscles, 4,300,000 per c.mm.; haemoglobin, 75%; colour index, 0.87; white blood cells, 19,800 per c.mm. (polymorph neutrophils, 90.5%; eosinophils, 1.0%; basophils, 0.5%; large mononuclears, 6.5%; metamyelocytes, 1.5%). Agglutination tests of serum for enteric fevers and brucellosis were negative on Feb. 26 and April 2. No pathogenic coliform organisms were found in the faeces. Urine examination revealed pus and epithelial cells in small numbers, a few red blood corpuscles, and a trace of protein. Casts and crystals were not seen, and there was no growth on culture. Radiographs of the chest revealed localized pleural thickening in the right costo-phrenic angle.

The patient did not respond to chemotherapy and there was no improvement in the condition of the legs with vitamin B treatment. She died in the middle of May (about three months after admission) with no definite diagnosis. The various diagnoses suspected were: in the early stages, *infective polyneuritis*; in the later stages, *abdominal Hodgkin's disease*.

Appearance of organs at necropsy: (1) Nodular swellings 0.5 cm. in diameter along course of coronary arteries; (2) fine nodular enlargement along mesenteric arterioles; (3) numerous infarcts in kidneys; (4) thickening of arterioles in liver and spleen; (5) acute ulcers in stomach, duodenum, jejunum, and ileum; (6) acute fibrinous pericarditis. Histological examination showed: chronic polyarteritis nodosa in liver, spleen, suprarenals, pancreas, stomach, ileum, and mesentery. The axillary and radial arteries were normal.

Discussion

It is worth noting that this case (in spite of great difficulties in diagnosis) is in reality almost "classical" of periarteritis nodosa as described in most of the textbooks. The urticarial rash and pain in the joints mentioned above are certainly of great interest, and it is important to insist on this particular point of the clinical picture, as not only may it be a help in suspecting periarteritis nodosa in an obscure case of such

nature, but it also shows the value of Rich's conclusions on the aetiology of the disease. This author had the opportunity of examining cases of periarteritis nodosa due to serum sickness. It was felt that in seven cases observed over a short period of nine months a definite connexion existed between serum sickness and periarteritis nodosa.

Among the arguments in favour of this connexion were the following: *(a)* In 5 out of 7 cases treated with serum the vascular lesions were definitely fresh. *(b)* None of the patients had had symptoms suggestive of periarteritis nodosa prior to administration of serum. *(c)* Following the study of Clark and Kaplan, it was felt that micro-organisms (such as the pneumococcus or influenza bacillus) cannot be regarded as responsible for vascular lesions of the type of periarteritis nodosa.

The following facts could be regarded as strongly suggestive, according to Rich, of the part played by serum sickness in causing the vascular lesions, independently of sulphonamide therapy.

> "First the lesions were found in the viscera of all the four cases of serum sickness that came to necropsy during the brief period of nine months. In the second place, while the patients had also received sulphonamides, the urticaria and general glandular enlargement in one case seem rather clearly to have been due to serum, for these manifestations of serum sickness appeared seven days after the first injection of the serum and four days after the sulphonamide had been discontinued. In the third place, the lesions were found in the single fatal case of serum sickness available in our files before the advent of sulphonamide therapy."

It is also of great interest, according to Rich, to remember that necrosis of the vessels with adventitial inflammation was described in Gerlach's study of the histology of the Arthus phenomenon as long as twenty years ago. In a recent article Miller and Nelson (1945), describing a case of polyarteritis nodosa developing during antisyphilitic treatment, suggest that "the condition represents in this case an anaphylactic type of hypersensitive response to arsenicals."

Experimental evidence of the relation of anaphylaxis to periarteritis nodosa has been reported by Rich and Gregory (1943), who produced multiple lesions of the condition in rabbits by injection of normal horse serum. In order to sensitize the animals quickly they gave each of them an intravenous injection of 10 ml. horse serum per kg. of body weight; by the twelfth day afterwards intradermal injections of horse serum showed that the animals were anaphylactic to the serum, and then at varying intervals different animals were given horse serum intravenously in doses of 2 ml. or more. Periarteritis nodosa was found in different situations in each of the rabbits.

With the theory of anaphylaxis in mind, it is clear that the discovery of the responsible antigen would be of great help in the treatment of this very serious and often fatal condition.

Summary

A case of periarteritis nodosa is reported. Diagnostic difficulties are stressed and the possibility of anaphylaxis in a causative role is pointed out.

I should like to thank Dr. J. M. Alston, pathologist, Group Laboratory, Archway Hospital, for the laboratory investigations and for his help and suggestions; and Dr. S. H. G. Robinson, to whom I am indebted for the post-mortem examination.

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The Ministry of Health states that considerable economy in the use of phials and packing materials would result if a proportion of the penicillin were distributed in packs larger than the present 100,000 units. It is accordingly proposed to pack a proportion of it in phials containing 200,000 units, 1/2 mega unit, and 1 mega unit. Distribution hospitals receiving substantial amounts are being notified of the new packs and invited by the Ministry of Supply, where this can be done without wastage of the drug, to accept a proportion of their monthly allocation in the larger packs. Smaller distributing centres not approached directly by the Ministry of Supply are requested to consider whether they can take a proportion in these larger packs and to inform the Penicillin Production Control, Ministry of Supply, Portland House, Tothill Street, London, S.W.1, accordingly.

A CASE OF METASTATIC GAS GANGRENE

BY

H. K. BOURNS, M.B., B.Ch.

Capt., R.A.M.C.; Graded Orthopaedic Surgeon

The following case is reported because, although gas-gangrene infection is comparatively common in war surgery, metastatic spread is very rare. So far as is known this was the only case reported from the B.L.A.

Case History

Trooper A., aged 29, was admitted to a base hospital acting as a C.C.S. at approximately 4 p.m. on April 23, 1945. He had sustained wounds in both legs from a mine at about 10 p.m. on April 22. First-aid dressings had been applied in a forward unit and he was evacuated by air transport. His general condition was good all the time. The limbs were supported on Cramer wire splints. One dose of 2½ g. of sulphanilamide had been given.

On examination there was a small linear wound in the right mid-leg, over the anterior tibial compartment, with obvious laceration of muscles; and a gross swelling and ecchymosis of the left ankle and foot, with some blisters—painful, with limitation of all movements. The diagnosis was a penetrating wound of the right leg and a simple fracture of the os calcis of the left leg.

Operation was performed at 10 p.m. on April 23. Débridement of the right leg was carried out, with removal of loose fragments of fractured fibula and some clothing from the depths of the wound, where it had penetrated the posterior compartment. The anterior tibial vessel was severed. Local penicillin-and-sulphanilamide powder was applied, covered by loose vaselined dressing. A padded Cramer wire splint was fitted above the knee. The skin of the left leg was cleansed and a light padded plaster splint applied. The case was now judged to be suitable for evacuation further back. A penicillin drip, 100,000 units daily, had been started at approximately 8 p.m.

April 24.—General condition very good.

April 26.—At 1 a.m. the patient reported pain in the right leg and complained of the splint. Movements of toes were normal; no pyrexia; pulse 100 and of good volume. Splint adjusted with relief and morphine 1/4 gr. (16 mg.) given. At 9 a.m. there was obvious spreading gas-gangrene infection of the right leg with toxaemia. Plasma transfusion was started, and at 11 a.m. amputation at the right mid-thigh was performed, because of gas and oedema up to the groin anteriorly and 3 in. (7.5 cm.) from the natal cleft posteriorly. Linear incisions were made in the skin of the stump and penicillin sulphanilamide powder was applied, covered with vaselined gauze. Local irrigation with penicillin solution was done twice daily through rubber tubes. A course of sulphathiazole tablets by mouth was started. At 11 a.m. 45,000 units of anti-gas-gangrene serum were given. Plasma was transfused, followed by blood, of which he had five pints (2.84 litres) by the evening of the 27th.

April 27.—General condition very good (described as "too good" by the transfusion officer). The penicillin drip was increased to 400,000 units daily. In the evening the patient complained of severe pain in the left foot. At 10 p.m. operation was performed. The skin was reddened and tense on the dorsum of the foot. The plantar compartment was swollen and there was crepitus. Incisions were made (1) on the dorsum—two longitudinals; (2) in the plantar compartment—one medial plantar; (3) in the ankle—postero-lateral and postero-medial. Gas and some pus were present on the dorsum. The plantar muscles were poor in colour, but not dead—thought to be due to streptococcal myositis.

April 28.—General condition good. Penicillin reduced to 100,000 units intramuscularly daily.

April 29.—Right stump dressed; clean, so loosely sutured. Penicillin tubes removed.

April 30.—Left foot dressed. Still a smell, and anaerobic myositis of plantar muscles. Further excision. Tubes inserted for hydrogen peroxide irrigation.

May 2.—Left foot dressed. Infection still present; tubes removed and further excision done.

May 3.—Right stump dressed. Sutured further because of absence of infection.

May 4.—Infection present in left foot, so extensive excision done. Eusol dressing. Penicillin discontinued.

May 6.—Dressing left foot. Clean; but plantar muscles all absent, and posterior dislocation of body of astragalus noted. Reduction not attempted because of infection.

May 8.—It was evident that the left foot would be very poor, even if it could be saved. Reduction of the astragalus would have been dangerous in the circumstances, despite the fact that infection appeared to be under control.

May 10.—Amputation 4 in. (10 cm.) above left ankle-joint. No infection in this region, so suture, with rubber drains, was done.

The posterior tibial artery was contused and thrombosed at site of injury. Penicillin I.M. had been restarted on May 8, and was continued until the 12th at 100,000 units daily. Three pints (1.7 litres) of stored blood were transfused on May 9–10, and 1 pint (568 ml.) of fresh blood on the 11th.

May 12.—Drains removed. Healing well.

No further anxiety was felt, and the patient daily improved both physically and mentally, with open air and good diet. By May 20 both stumps were clean and almost healed, and he was evacuated to the United Kingdom.

The total dosages given were: Penicillin—2,300,000 units (April 23 to May 4, May 8 to 12); sulphathiazole—56 g. (April 26 to 30). Blood—8 pints (4.5 litres) stored, 1 pint fresh. The time intervals observed during treatment were: Wound to operation, approximately 24 hours; wound to gas gangrene, approximately 75 hours; first operation to amputation, 61 hours; gas gangrene to left-foot operation, 46 hours.

Discussion

The development of gas-gangrene infection in the wound of the right leg at the end of three days was rather remarkable in this case, despite damage to the anterior tibial artery. The length of time between wounding and the first operation was 24 hours. If there had been heavy infection one would almost certainly have seen signs at that time, but, in fact, the wound was very clean, and would have been classed as comparatively minor. It is unlikely that infection and invasion developed immediately after the first operation, because spread would have been rapid and movements of the toes restricted. During all this time the patient was having a daily dose of 100,000 units of penicillin intramuscularly. This dose is considered adequate by most authorities (McIntosh and Selbie, 1943; Cutler and Sandusky, 1944). The vaselined gauze dressing, although applied lightly, may have plugged the wound and provided conditions favourable to the development of infection. The quick spread and quick decline in general condition suggest late onset.

The interest in this case, however, is the metastatic spread to the left foot. The time at which the bacteria entered the blood stream merits consideration. If this occurred before the second operation the bacteria must have existed there for about two days despite adequate blood levels of penicillin and sulphathiazole. It may have occurred at the operation, although a tourniquet was used and the limb was removed very quickly. Invasion after the operation is unlikely, because the oedema and gas in the fascial planes settled so quickly and there was no muscle infection at the site of amputation. One is led to the conclusion that the invasion occurred either before or during the operation. The penicillin in the blood stream was bacteriostatic but not bactericidal to the organisms, and in the left foot they passed outside the power of the drug. The long interval before operation may have been a factor, and demonstrates once more the danger of delay in adequate surgery. The fact that the left plantar muscles were the site of the metastatic spread was probably due to their insufficient blood supply, resulting from damage to the posterior tibial artery at the ankle.

Clinically, the condition was very similar to streptococcal myositis (MacLennan, 1943), and so incision rather than excision was first performed. Both muscle and pus were sent for culture; *Clostridium welchii* and other anaerobic organisms were grown, but repeated examinations failed to reveal any streptococci.

The total destruction of the plantar muscles must be attributed to their poor blood supply, because the infection on the dorsum of the foot promptly subsided after incision and chemotherapy. Destruction of muscle, whatever the cause, is a favourable condition for anaerobic infection, and in such a case chemotherapy is ineffective. This was emphasized by Wood Power (1945).

Comment

This case bears out the well-known facts that early surgery is always essential, and that removal of all dead muscle is the only safe measure for preventing gas-gangrene infection or stopping its spread. In this case it would appear that the blood level of penicillin, although generally considered to be adequate, was not capable of preventing the spread of the organism by the blood stream.

I wish to thank Brig. R. J. Shaw, *M.C.*, A.M.S., lately commanding a general hospital, for permission to publish this case. My thanks are also due to the transfusion officer, Capt. (Miss) Winterton, R.A.M.C., whose help and treatment were invaluable in this case, and to the sisters and orderlies who nursed and cared for a very good but very ill patient. Lastly, my gratitude is due to Major J. D. MacLennan, R.A.M.C., for his advice and encouragement in the preparation of this report.

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SIGNIFICANCE OF SYMPTOMS IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS

BY

W. POINTON DICK, M.R.C.P., L.R.C.S.

Physician to the Middlesex C.C. Mass X-Ray Unit

Since the introduction of mass miniature radiography in this country in 1943 considerable discussion has arisen as to the most efficient way to employ this new weapon. There has been a body of medical opinion which has decried the advantages of orthodox mass miniature radiography as at present practised. It has put forward as an alternative that it would be more productive of results and more economical of personnel to concentrate the use of mass radiography machines on the examination of those sections of the population presenting symptoms suggestive of chest disease and that general practitioners should refer for fluorography all persons who have suspicious symptoms, however slight. The present paper was prompted by these suggestions, and is an attempt to discover the relative merits of the two methods if pressed to their logical conclusion.

It is generally accepted that the number of persons found by orthodox mass radiography to have significant lesions is in the region of 1.3%. This figure can be subdivided into observation cases, 1.0%, and treatment cases, 0.3%, and it has been found (Dick, 1945) that approximately two-thirds of the first group and one-half of the second group are symptom-free.

In order to arrive at a figure for the number of the general population having such symptoms as might be indicative of disease of the chest a questionary was presented, and where necessary explained, to each of 5,308 persons (2,713 men and 2,595 women) passing through the Middlesex County Council Mass *X*-ray Unit in the month of June, 1945. The questionary was as follows, and the results are given in Tables I and II, where the symptoms are rearranged in order of frequency.

Questionary

1. Have you a cough of one or more months' duration?
2. Any phlegm?
3. Have you coughed up any blood recently?
4. Have you any pain in your chest?
5. Are you more short of breath than you were six months ago?
6. Are you losing weight?
7. Are you feeling off colour or tired?
8. Have you had "flu" or frequent colds recently?
9. Have you seen a doctor for any of the above complaints?

It will be seen that the predominant symptom in men was cough and in women lassitude, and that 36% of all those interviewed presented one or more of the symptoms listed in the questionary. This figure approximates very closely to that for the proportion of persons found by mass radiography to have significant lesions with symptoms. In other words, in cross-sections both of the general population and of persons with significant lesions the proportion of those presenting symptoms is the same.

This appears to indicate that symptoms in themselves are not likely to be of great assistance in the discovery of previously undiagnosed pulmonary tuberculosis. It is, however, recognized

TABLE I.—*Men*

Total Interviewed	Cough	Phlegm	Lassitude	Frequent Colds	Dyspnoea	Pain	Loss of Weight	Haemoptysis	Total with Symptoms	Attended Doctor
2,713	437	431	372	286	189	121	86	25	1,067	172
% of total	16·1	15·9	13·7	10·6	7·0	4·5	3·2	0·9	39·4	16·1*

TABLE II.—*Women*

Total Interviewed	Lassitude	Colds	Cough	Phlegm	Dyspnoea	Loss of Weight	Pain	Haemoptysis	Total with Symptoms	Attended Doctor
2,595	315	281	247	195	154	129	86	7	844	169
% of total	12·1	10·8	9·5	7·5	5·9	5·0	3·3	0·3	32·5	20·0*
							M. + W. ..		36%	17·8%

* Percentage of those with symptoms.

that in actual fact a higher proportion of cases are found by the method of *x*-raying those with symptoms referred by their doctors than by routine mass radiography. There seem to be several reasons for this apparent contradiction, as obviously there are factors at work which are selective. Patients can be referred by their doctor only if first they attend him, and those with advanced disease are more likely to seek consultation. It should be noted that the answers to the questionary have shown that only one-sixth of those complaining of symptoms consulted their doctor. One hesitates to think of the resulting overcrowding of surgeries if the other five-sixths had attended. A further reason is that doctors will tend to refer for an *x*-ray examination those cases which they would have normally sent to a chest clinic for an interview and full examination.

It follows that as more and more "symptom cases" are referred to a clinic so will the percentage of significant lesions found tend to fall and to draw closer and closer to that disclosed by mass miniature radiography.

It would appear that the most practical way to employ the limited number of mass miniature radiography machines at present available is on routine mass radiography during the greater part of the week, while arranging for them to be used to *x*-ray such groups as "symptom cases" referred to the clinic and contacts of positive cases on one afternoon a week. An afternoon session would allow sufficient time for one unit to examine all cases in these two latter groups in a population of some 500,000, judging by figures at present available.

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The report of the honorary medical staff of the Harrogate Royal Bath Hospital, presented at the annual meeting, said that the past year had been a momentous one in the history of the hospital, as it marked the beginning of a new era in the hospital's activities, arising out of the report on the future of Harrogate by Prof. Stanley Davidson (noted in the *Journal* of Aug. 25, p. 259). At the request of the British Spas Federation a member of the staff in company with a member of the Mineral Water Hospital at Bath appeared before the Cohen Committee at the Ministry of Health and gave a detailed report on the work at the spas. They urged that the spas should become key centres for the treatment of rheumatism and general rehabilitation in the new National Health Service. The staff also met representatives of the Ministry and of the Leeds Medical Faculty to discuss a plan for the treatment and investigation of cases of rheumatism in the Yorkshire region. As a result of this Mr. Reginald Broomhead had been appointed honorary orthopaedic surgeon and Prof. S. Hartfall honorary physician to the hospital; also a rheumatic clinic had been opened at the General Infirmary at Leeds under Prof. Hartfall, with a member of the staff of the Harrogate Royal Bath Hospital working as clinical assistant to him. Thus there would develop a closer connexion between the hospital and Leeds University.

Medical Memoranda

Long-standing Dislocation of Mandible: Manual Reduction

The following case is reported as a matter of interest: the three months' duration of the dislocation is unusual, and the possibility of reduction at this period is noteworthy. The method described, of reducing one side first, may be useful in the more difficult cases of mandibular dislocation.

A housewife aged 39 was admitted with the history that three months previously she had had 16 teeth extracted under gas anaesthesia at one sitting. After the operation her face had been swollen and painful for a fortnight, during which time she had not attempted to bite on her food. When the swelling subsided she was conscious that her jaws did not meet, but attributed this to the multiple extraction and sought no advice on the matter. Five days before admission she reported back to the dentist, who noticed that her mandible was dislocated and arranged for her to come into hospital. On admission a bilateral dislocation of the mandible was found. The patient was of low intelligence, which probably accounted for her passivity during the previous three months.

A determined effort at reduction was attempted in the out-patient department without success. Four days later a second attempt was made; prolonged pressure was exerted on the right side in a downward and inward direction, and after ten minutes the spasm was overcome, the condyle was felt to move, and finally to slip back into place. Reduction of the opposite condyle followed on the same lines, though with much less difficulty. A barrel bandage was applied. A week later she was able to open her mouth fully, and when seen recently she had been fitted with a complete set of artificial teeth and had full movement of her temporo-mandibular joints.

G. M. MÜLLER, F.R.C.S.,
Surgeon, E.M.S. Hospital, Botleys Park.

An Unusual Case of Obstructed Labour

The following case is worth recording if for no other reason than its rarity.

CASE HISTORY

Mrs. X., aged 35, was admitted to hospital at 3 p.m., labour having just started. The pregnancy had been an uneventful one, apart from the diagnosis of twins, with slight hydramnios. It was her third pregnancy, her first being twelve years ago, and her second, twins, four years ago. There were no difficulties with her previous confinements, and none was anticipated with this one.

Strong labour pains started soon after her arrival in hospital, and in about eight hours a breech began to appear. She was examined, and as the cervix was fully dilated her doctor decided to assist the delivery of the twins. Difficulty was experienced in bringing down the breech, and she was left for an hour or so, but in spite of very strong pains no progress was made. She was again examined, under chloroform anaesthesia, and a diagnosis of locked twins made—a very true one, as it turned out. I was called into consultation at this stage, and under deep anaesthesia made a thorough examination to find the cause of the non-descent of the breech, which had remained with only the buttocks of the foetus exposed for the past three hours. Examination was difficult by reason of the bulk of the foetus in the vaginal canal, but it eventually transpired that there was a large bridge of tissue joining the chest of this foetus to the other twin in the uterus. Locked twins indeed!

It had not fallen to my lot to have to deal with Siamese twins before. The ideal plan would appear to be division of the bridge of tissue joining the twins, but this could not be reached because of the bulk of the presenting foetus. Accordingly this foetus was eviscerated and then amputated through the lower lumbar spine. Access was then much simpler, and the other foetus was fairly easily examined. It was then apparent that the twins were joined sternum to sternum Something in the nature of an internal version was then performed and the buttocks and legs of the second foetus delivered. Another evisceration was carried out, and then it was found possible, with some considerable traction, to deliver the remains of the chests, the four arms, and the two heads without dividing the tissue bridge. The heads were fortunately small and soft, and moulded well. Two small stitches were required in the perineum. The patient made an uninterrupted recovery.

Examination of the twins was interesting. They were normal well-developed foetuses, apart from the bridge of tissue described below. Their combined weight was 10½ lb. (4.75 kg.) or, making allowance for the evisceration, something over 11 lb. (5 kg.). The placenta was a large normal single one with one cord joining the twins at the lower edge of the tissue union. The twins were joined from this combined navel, chest to chest, by a wide and strong bridge of skin, cartilage, and viscera, to a point approximating to the upper end of the sternum. Evisceration had made an accurate assessment of the internal anatomy of the twins difficult, but there appeared to be one heart, one liver, and four lungs, while the rest of the abdominal contents were duplicated in normal fashion.

A. N. ROXBURGH, M.B., CH.B., F.R.C.S.ED.,
County Surgeon, Caithness.

Reviews

BACTERIOLOGY AND IMMUNITY

Topley and Wilson's Principles of Bacteriology and Immunity. Revised by G. S. Wilson, M.D., F.R.C.P., and A. A. Miles, F.R.C.P. Volumes 1 and 2. Third edition. (Pp. 2,054; illustrated. 60s.) London: Edward Arnold.

Owing to the lamented death of the senior author the task of preparing a third edition of *The Principles of Bacteriology and Immunity* has been undertaken by G. S. Wilson and A. A. Miles. Ten years have elapsed since the appearance of the second edition, which was reprinted six times, and to incorporate the advances in knowledge during this prolific period in a work of this scale has been an immense undertaking. By performing it with such thoroughness at a time of unexampled difficulty the authors will have earned the gratitude and admiration of bacteriologists throughout the English-speaking world. The work has reverted to the two-volume form, and increased in length by 452 pages, owing not only to innumerable additions to the text but to considerable expansion of almost every list of references; those dealing with tuberculosis, for instance, now occupy nine pages. This is a valuable feature, which will save endless time to the reader in search of original sources and detailed or obscure information.

The general plan remains unchanged, but one chapter has been omitted and two new ones introduced. The former is that on the bacteriology of soil; the chapter on nitrogen-fixing bacteria, which always seemed a little exotic in a work on medical bacteriology, nevertheless remains. The bacteriology of air is the subject of one new chapter, which deals mainly with the studies of air-borne infection pursued during the war, and its prevention by dust elimination and by the use of ultra-violet light or germicidal mists or vapours. Chemotherapy is the subject of another; this is concerned chiefly, though not exclusively, with the sulphonamides and penicillin and other antibiotics. Systematic instruction in the theory of this branch of therapeutics is clearly part of the duties of the bacteriologist.

Of additions to existing chapters it is possible to mention only a few. Some idea of their extent may be gained from the fact that the number of virus diseases described has grown from 54 to over 80. There is a good deal of new matter on gas gangrene, and in the description of the streptococci, which has been rearranged; Menkin's work on inflammation is discussed, and a homily on the design of experiments, no longer under the heading "Apologia," has been expanded in forceful language. The tone of scepticism, and in many matters agnosticism, which pervades this work is doubtless justified by many unreliable or doubtful observations contained in the literature which it surveys. Naturally, few new bacteria have made their appearance, but brief mention is made for the first time of *F. (Bacteroides) melaninogenicus, Ps. caviae,* and *B. rotans,* and other bacilli having motile colonies; the number of serological types of *Salmonella* described has increased from 51 to 140. The generic names *Salmonella* and *Shigella* have been adopted, the former including the enteric group. There are many new illustrations, some showing minute structure as revealed by the electron microscope.

The authors apologize for the increased length of the book, offering "the paradoxical excuse that we have not had time to be more concise." There was no need for this: new work has been assimilated without repetition. But in its present form this work is more an encyclopaedia than a textbook, and if it is to maintain the latter character it will need pruning before its next appearance. Viewed in either light it is of course indispensable.

DIAGNOSIS OF CHRONIC PANCREATITIS

Étude Clinique et Radiologique des Syndromes Pancréatiques Chroniques avec Prédominance des Troubles de la Sécrétion Externe. By Dr. R. Voet. (Pp. 210; illustrated. No price given.) Courtrai: Jos. Vermaut.

This is a complete but concise account of the diagnosis of chronic pancreatitis, which should be of interest to readers in this country, as current advances have not yet been assimilated into British practice. The author points out that the pancreatic juice is the most important of the digestive secretions, and he states that 7% of patients visiting a gastro-enterological clinic were found to be suffering from pancreatic disease. He describes in detail the two main advances in diagnostic technique, which are the analysis of the pancreatic juice obtained through the duodenal tube after intravenous injection of secretin, and the *x*-ray study of the changes set up by pancreatic disease in the stomach and duodenum. Defective splitting of fat can be demonstrated only by giving a very high dose of fat, and the figure which is of importance is the number of grammes of fat split per kg. of body weight. Little reliance can be placed on commonly accredited signs and symptoms such as diarrhoea and steatorrhoea, lipase and diastase in the serum and urine, and glycosuria. The most important symptoms are disturbance of appetite, a sensation of distension, and epigastric pain. The pain is commonly situated to the left of the midline and has a left-sided radiation. It is characteristically irregular in occurrence, and the attacks may have the severity of a colic. Pancreatitis may occur alone, or it may be associated with peptic ulcer, cholecystitis, or chronic appendicitis. Case histories are given to exemplify the various clinical aspects of pancreatitis, and there is a collection of *x*-ray photographs. The book has an unusually good bibliography for a publication in French. Dr. Voet's writing will persuade readers that they have been missing many cases of chronic pancreatitis, and that British gastro-enterology would fare better with a little less gastric and a little more pancreatic analysis.

OTO-RHINO-LARYNGOLOGY

Diseases of the Nose, Throat and Ear, including Bronchoscopy and Esophagoscopy. Edited by Chevalier Jackson, M.D., Sc.D., F.A.C.S., and Chevalier L. Jackson, M.D., M.Sc., F.A.C.S. (Pp. 844; 934 illustrations on 581 figures, including 18 plates in colour. 50s.) London: W. B. Saunders Company.

The 1945 Year Book of the Eye, Ear, Nose and Throat. The Eye, Louis Bothman, M.D. The Ear, Nose and Throat, Samuel J. Crowe, with the collaboration of Elmer W. Hagens, M.D. (Pp. 544; illustrated. $3.00 or 18s.) Chicago: The Year Book Publishers; London: H. K. Lewis and Co.

The Jacksons, father and son, have edited a new book on *Diseases of the Nose, Throat and Ear,* which seems to replace Jackson and Coates, now some years old, but is in no sense a new edition of that work. The lordly volume now presented includes a series of articles on the ear, which constitute a complete synopsis of otology. There are about two dozen of these articles, and some attempt seems to have been made to keep them of about the same length, no doubt with the object of maintaining a proper proportion. The most important of these, on otogenic intracranial infections, by Dr. Kopetzky, has been allotted scarcely enough space under this scheme, and in the matter of chemotherapy has already ceased to be up to date, so rapidly are the methods changing in this department of surgical advance. The Jacksons themselves have not contributed any of the articles on the ear, nor any of those on the nose and pharynx. These latter include more than is usual, and there is a full description of plastic surgery and of diseases of the lips, mouth, and tongue. Attention must be drawn to a slip of the pen in the article by Dr. New and Dr. Erich on tumours of the nose and accessory sinuses on p. 79, where it is suggested that highly active malignant neoplasms should be treated by insertion of radon seeds directly into the tumour mass, and that after such implantation of seeds external irradiation should also be employed. Such a technical error can cause much suffering. Most of the articles on the larynx and on bronchoscopy are by the Jacksons themselves, chiefly the elder, and are on lines already familiar in their published works. The same applies also to the oesophagus, but there are a few interesting articles by Dr. Mosher and Dr. Clerf. The usual standard therefore is maintained throughout, but all historical references have been purposely excluded, so that, while the book is of the highest technical excellence, it lacks the philosophy which makes for a real understanding of medicine, and the reader is left with a severely practical and rather mechanical presentation. The book is generously and superbly illustrated.

The *Year Book of Eye, Ear, Nose and Throat* appears again for the year 1945, as carefully edited as formerly and with an excellent selection of current literature. For the literary matter no apology is needed, but the reader will notice that the paper is still of wartime quality. Subjects which may be noted as of special interest are the relation of ophthalmology to neurology, various articles on the more recent applications of chemotherapy

in all the regions concerned, a collection of papers on the results of fenestration for otosclerosis, a summary on common colds with wise remarks by the editor for ear diseases, Dr. Crowe, on the function of lymphoid tissue and lymphocytes, and at the beginning a special article by Dr. Louis Bothman, editor for eye diseases, on allergic iritis. This annual publication keeps its standard and remains as useful and reliable as ever.

HUMAN EMBRYOLOGY

Ourselves Unborn. An Embryologist's Essay on Man. By George W. Corner. The Terry Lectures. (Pp. 188; illustrated. $3.00 or 20s.) New Haven: Yale University Press; London: Oxford University Press.

This book is an amplification of three lectures delivered at Yale University in 1944. The lecture form is clearly apparent and is seen at its best, for here are clarity of exposition, a style whose simplicity cannot conceal its excellence, and, above all, a direct contact between the reader and a gracious, friendly personality—a contact which many a teacher could not achieve even in the flesh. Dr. Corner, one of the greatest embryologists of this century, has called his first essay "The Embryo as Germ and as Archtype." It is a brilliant description of human embryology, illustrated by admirable diagrams and photographs. It must be one of the clearest yet most concise accounts ever written. It is intended that the layman should follow it—and he surely can; yet many a biologist and many a medical man will find it helpful in no small degree.

The third essay deals principally with the evolution of the human species in the light of present-day embryological knowledge, and again it is remarkable how much Dr. Corner has packed into so small a space. It is the second essay, however, which chiefly assembles in one brief chapter material which the student could not find anywhere else in one place. It is Dr. Corner's own particular field—the causes of foetal death and malformation. All the most recent advances are included in the synthesis; such, for example, as the Rh story and the role of rubella as a possible cause of congenital defects of the eye and other organs. The intricate nature–nurture relationship is clearly analysed, and it is shown how the very same malformation may result either from the presence of an abnormal gene or equally because of abnormal environmental conditions *in utero*; in other words, a bad egg in a good environment, or a good egg in a bad environment, can become abnormal in the same way. This is an essay of no more than fifty-two pages which can be warmly commended to medical men, from the student to the obstetrical specialist, and to biologists at all stages of knowledge also.

SUPPLEMENTS TO THE CODEX

The British Pharmaceutical Codex, 1934. *Supplements I–VII.* 1946. (21s.) London: The Pharmaceutical Press.

During the war years Supplements to the *Codex* have been published at intervals. The first, dealing with standard dressings, was published in 1940; the second, a Supplement to the well-known Codex Formulary, in 1941; and the third, providing new monographs and a valuable appendix of proprietary names, was published in 1942. How many readers are aware that in the middle of London, throughout the period of the air raids, committees continued to meet to write a monograph, say on propyl hydroxyl-benzoate or raspberry leaf, as though it were peacetime? But it was so: people carried on with their tasks. The fourth and fifth Supplements were also published in 1942, the former containing amendments to monographs, and the latter dealing with "quinine preparations" in the sense of explaining what to dispense when preparations ordinarily containing quinine are prescribed. In the sixth Supplement (1944) are monographs for sterilized catgut (chorda chirurgicalis) and for non-sterile gut (chorda cruda) which might be studied with advantage by those surgeons who are unaware of the care taken in preparing gut in this country, and of its legal control. The seventh Supplement (1945) contains additional monographs and a cumulative index. All these Supplements have now been collected in one volume. This can be recommended to doctors as a most useful reference book which explains how drugs (e.g., hexoestrol or thiouracil) act and as a convenient guide to effective prescribing.

Notes on Books

A Surgeon in China, by Dr. W. S. FLOWERS, is published by the Carey Press, 95, Gloucester Place, London, at 1s. It is a series of personal letters telling of the work of ten British medical missionaries and 17 nurses who worked among Chinese wounded and sick during the war. Dr. Flowers, leader of the unit, writes modestly, but his letters, recounting the appalling shortages of equipment and the courageous and able way in which recurring difficulties were overcome, form an epic tale. The booklet has many good photographs and is well worth its small cost. Lady Louis Mountbatten's appreciative foreword is a worthy introduction to this interesting little book.

The Interdepartmental Committee on Dentistry, under the chairmanship of Lord Teviot, completed its work with a final report noticed in these columns on Feb. 23 (p. 284). The General Medical Council and Dental Board of the United Kingdom have now issued as a book of 332 pages the Memoranda of Evidence submitted on their behalf to the Teviot Committee in 1943–4. Copies, price 10s., may be had from the Dental Board of the United Kingdom, 44, Hallam Street, London, W.1.

Preparations and Appliances

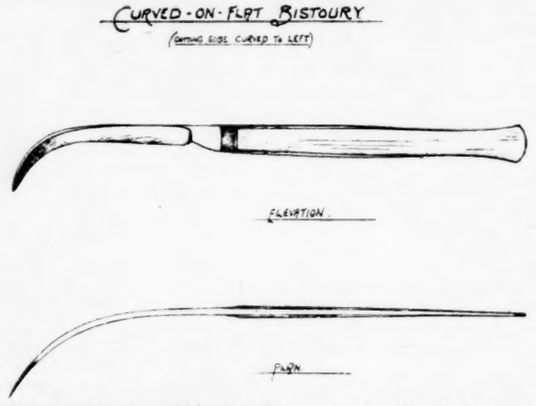
AN EXCISION KNIFE FOR TROPICAL ULCERS

Mr. S. L. A. MANUWA, M.D., F.R.C.S.Ed., D.T.M.&H., surgical specialist, Colonial Medical Service, Nigeria, writes from Adeoyo Hospital, Ibadan:

The difficulty of treatment of chronic tropical ulcers is indicated by the large variety of suggested methods. These vary from exposure to air, radiant heat, or ultra-violet rays with no dressing at all, to occlusive dressings with zipp and plaster, "cellophane," or the "almaza patch"; urea or insulin dressings; curettage; the so-called potassium permanganate cautery; spinal anaesthesia and intraspinal injection of alcohol; and lumbar sympathectomy.

Complete surgical excision is a very good method of treatment. It leaves a clean, fresh surface which can be immediately or subsequently skin-grafted, heals readily, and avoids much of the unsightly scarring which often follows an ulcer treated by other methods and allowed to heal by granulation.

The excision knife which for the past ten years I have found very useful for this purpose is illustrated below. It looks like



a bistoury; but in addition to a curve on the sharp edge it also has a curve on the flat, the idea of this being to enable the knife to fit the edge and concavity of the ulcer.

The method of use is to apply the edge of the knife to the skin about one-eighth of an inch (3 mm.) beyond the edge of the ulcer, and with a sawing movement slice off the ulcer about an eighth of an inch deep to the surface, emerging the same distance on the opposite side. This leaves a clean, slightly concave bed, which can be immediately grafted. The excision takes only a few seconds. Oozing, which may be troublesome, is controlled by hot saline towels and firm pressure.

The advantage claimed for this knife over excision by an ordinary scalpel is that it is easier and more rapid to use, and that it leaves a more uniformly level bed. It has the minor disadvantage that it requires more care to sharpen.

The knife is made, in three sizes, by Messrs. Down Bros. Ltd., London.

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THE HOSPITALS

One of the most contentious of the Minister of Health's proposals is the nationalization of the hospitals, the ownership of which, it is declared in the Bill, is to become vested in him. The Council of the B.M.A., on grounds of public interest, is opposed to this. The Consultant Services Committee of the Royal College of Physicians, on which the B.M.A. is represented, has just passed the following resolution for submission to the constituent bodies: "The Consultant Services Committee approves the transfer of ownership of hospitals provided the composition of the Regional Boards is satisfactory." According to the Third Schedule of the Bill the Minister will appoint the Chairman of a Regional Board, and other members after consultation with the University of the region, with representative medical organizations, with the local authorities, and with "such other organizations as appear to the Minister to be concerned." The original members of the Board shall include representatives of voluntary hospitals in the region. Nothing is said in the White Paper or the Bill about the numerical representation of these different groups except that "at least two of the members of the Board shall be persons with experience in mental health services." As the ratio of municipal beds to voluntary beds is as 2 to 1, it is to be feared that the local health authorities will be the dominant influence in the regional hospital boards to whom is to be entrusted the administration of the national hospital service provided for in Mr. Bevan's Bill.

Apart from the vocal Socialist minority of doctors who want to mould Medicine according to the doctrines of the Party to which they belong, a good many men see in Mr. Bevan's proposals a lesser evil than the municipalization of the hospitals which, they believe, might otherwise have been introduced. "Better a State hospital," they say, "than a council hospital." "Better the devil we don't know than the devil we do" is a curious attitude to adopt, and one showing a fearful lack of imagination. To look to the solution of the hospital problem on the basis of fear bodes ill for the future. There is no disagreement with the Minister's proposals for regionalization. His plan commands general assent. The fear that the only alternative to the proposed plan is to hand over the voluntary hospitals to local authorities is unfounded. No one denies that the hospital service of the country is at odds and ends, that many voluntary hospitals are in sad need of medical and physical repair, that many municipal hospitals are in a like state. With the introduction of a comprehensive National Health Service, it is clear that all hospitals will have to obtain the bulk of their money from central funds. It is clear, too, that both voluntary and municipal hospitals will have to sacrifice some of their local sovereignty to fit in with the over-all hospital strategic plan. But for this to happen is it necessary for them all to pass into the ownership of one man—the Minister of Health, whose power "to make regulations shall, if the Treasury so direct, not be exercisable except in conjunction with the Treasury"? The nationalization of the hospitals would cut short at one stroke one of the most stimulating forces in English life—the blending of voluntary and official effort in promoting the public welfare. The official mind is timid, and the Treasury mind is restrictive. Their union is always sterile. The stimulus to action, the fertile idea, the original impulse—in this country at least—have nearly always come from the individual man or institution working in an atmosphere free from the hampering regulations and circulars of central and local authority. As Prof. Henry Cohen said in an address last November: "Voluntary effort has paved the way for many a project which would have been ignored or hampered by a Department of State whose work was subjected to a Treasury axe."

Why are medical men so antagonistic to local authority rule and so distrustful of the council hospital? And why do they think, as many of them seem to think, that a bigger and more powerful authority will be better? Dr. Geoffrey Bourne analysed the former problem in these columns three years ago. In the voluntary hospital power and responsibility are distributed horizontally. In the council hospital they are exercised vertically. The administrator tends to be like a vertical hierarchy. Commonly the medical superintendent of the council hospital has absolute power in his own hospital—administrative and clinical. He may be a good man and wise; or he may not. He can alter the treatment ordered by an assistant officer supposedly in charge of a patient. The result is that in many municipal hospitals the assistant medical officers become disgruntled and resentful, and after years of durance content themselves with doing little more than what is officially expected of them. They become irresponsible because their full responsibility as adult men and women is not called forth: they deploy their energies in non-professional activities.

If this is generally a true picture—and, though there are notable exceptions, we believe it is—then we should demand the reform of the council hospital system, not that it should be abolished. We believe that the freer exercise of responsibility in the voluntary hospital is productive of far more good medicine and is something worthy of imitation. This is not to assert that all voluntary hospitals are good and all council hospitals are bad. Many of the smaller voluntary hospitals undertake work beyond their capacity. We should have the courage to admit that the practice of surgery in some hospitals leaves much to be desired.

Reforms are needed in both voluntary and council hospitals. But to effect these there is no need to turn them into State institutions and so perpetuate on a bigger and permanent scale the evils of officialdom that the great majority of medical men see and fear in the hospital controlled by the local authority. The Regional Board, by virtue of administering moneys provided from the centre, can influence hospital development and management and secure the reforms that are much needed in both voluntary and council hospitals.

Sir William Goodenough, chairman of the Nuffield Provincial Hospitals Trust, in a letter to the *Times* of April 6, while admitting the need for radical changes, considers that "a convincing case has not been made out for the transfer at the present time of the ownership of all hospitals from

local hands to central government." He points out that the "management arrangements provided in the Bill will, in practice, deny any real measure of local initiative and responsibility and, in consequence, it may well be difficult to attract the right type of people to participate in the running of the service." He draws attention to the Exchequer brake on local initiative and deplores the power of the Minister to control the administrative units by "directions without reference to Parliament." In the *Times* of April 9 Sir Ernest Pooley and Sir Hugh Lett, speaking for the King Edward's Hospital Fund, back Sir William Goodenough's plea for increased status and power for hospital management committees, and in one passage state the real case against the one-man ownership of the country's hospitals. We quote it in full.

> "Central guidance is no substitute for the appeal of the individual hospital, and anything which weakens that appeal is a dead loss to the service as a whole, and will react most gravely upon recruitment. In maintaining it no factor is more important than the existence of a management jealous for the reputation of its own hospital, and willing and able to take endless pains to that end. By and large, and of course with exceptions, the voluntary hospitals have throughout their long history solved the problem: they have shown that they can attract and retain medical and nursing staff; and the task before the Minister is how so to arrange matters that all hospitals possess the maximum degree of real freedom compatible with a properly organized and efficient service."

The Minister of Health has the support of the profession in his plan for basing the hospital service on sixteen or twenty Regions linked with the eleven university centres of England and Wales. In his proposals to nationalize the hospitals he has a divided profession. In his hospital plan he could secure the willing co-operation of the medical profession if he would modify his proposals for ownership and control.

THE LIFE SPAN OF THE RED CELL

Many attempts have been made to estimate the average life span of the red blood cell, and many different methods have been used; the estimates have varied between 14 and 200 days. One method is to deduce the duration of life of red cells from the time taken for the erythrocyte count to reach its maximum in man exposed to the low atmospheric pressures of high altitudes. Escobar and Baldwin,[1] for example, made observations on five young men who resided at an altitude of 10,000 ft. (3,050 m.) for two weeks, their erythrocyte count rising as a result between 1 and 1.5 millions. It took about 20 days for the count to return to normal, and the authors therefore concluded that the life span of the red cell lay between 18 and 30 days. After transfusion of large amounts of blood to patients with aplastic anaemia Isaacs[2] found the time necessary for the blood count to return to its pre-transfusion level to be between 5 and 27 days, with an average of 14 days, while Schiödt[3] estimated the time to return to normal level after haematemesis to be between 33 and 39 days. According to Baar and Lloyd[4] the average maturation time of the normal reticulocyte is seven hours. They argued that in normal subjects the daily destruction must be the same as the regeneration rate; therefore, if the percentage reticulocyte count (0.7%) is known as well as the maturation time, it is possible to calculate the life span of the erythrocyte. Thus the normal daily regeneration rate is $\frac{0.7 \times 24}{7}$ or 2.4%; the average life span of the red blood corpuscle is therefore 42 days. They are careful, however, to point out that this is "average" and that it in no way proves that each corpuscle lives the same length of time. They attempted to confirm this finding by trying to follow the survival of natural blood transfused into a patient with acholuric jaundice by analysing the recipient's Price-Jones curve into donor's cells and recipient's cells—an unsatisfactory method. Attempts have also been made to measure the life of the red cell by observations on pigment excretion; thus estimations of the daily excretion of bilirubin have given results of 15[5] and 40[6] days. Watson[7] doubts whether haemoglobin is changed quantitatively into bilirubin, but shows that if 300 mg. are excreted in 24 hours the daily wastage of haemoglobin is 0.8% and the length of life of the red corpuscle 140 days. These methods take no account of the wastage of muscle haemoglobin. They all involve calculating the life span in patients either suffering from disease or in grossly abnormal physiological conditions, and in the light of newer methods they certainly do not give the duration of the normal red cell in the normal individual.

In 1919 Ashby[8] developed a method of estimating the survival of transfused erythrocytes by means of differential agglutination. She showed that after transfusing blood of Group O to a recipient of another group such as A the recipient's cells could be agglutinated with anti-A sera and the unagglutinated donor's cells of Group O could then be counted. Ashby's results were variable, but Wiener[9] introduced modifications in the technique and concluded that the donor's red cells were removed from the recipient's circulation over a period of 80 to 120 days. Mollison and Young,[10] after further modifications, showed that the donor's cells were eliminated from the recipient's circulation at a constant rate, and in a group of 15 cases this elimination was not complete before the end of 109 days. Callender, Powell, and Witts[11] carried out experiments on four healthy male medical students, from whom blood was removed and replaced by cells from an equal quantity of Group O blood, so that the recipient's erythropoiesis was disturbed as little as possible. Inagglutinable red counts were then made six hours later, every few days for 14 days, and then at weekly intervals. They found that, apart from a slightly increased rate of destruction in the first few days, a fixed proportion of the blood was eliminated each day, the curve of decay of the transfused cells being linear and their average life 60 days. Mathematically it was concluded that red cells all live for approximately the

[1] *Amer. J. Physiol.*, 1934, **107**, 249.
[2] *Physiol. Rev.*, 1937, **17**, 291.
[3] *Amer. J. med. Sci.*, 1937, **193**, 313.
[4] *Arch. Dis. Childh.*, 1943, **18**, 1, 124.
[5] Brugsch, T., and Ratzlaff, K., *Z. exp. Path. Ther.*, 1912, **11**, 508.
[6] Bingold, *Folia haematol.*, Lpz., 1910, **42**, 192.
[7] Downey's *Handbook of Haematology*, London, 1938, Vol. IV.
[8] *J. exp. Med.*, 1919, **29**, 267.
[9] *Arch. Pathol.*, 1941, **32**, 227.
[10] *Quart. J. exp. Physiol.*, 1940, **30**, 313; 1942, **31**, 359.
[11] *J. Path. Bact.*, 1945, **57**, 129.

same time—120 days in men, which is the true average life. The normal rate of replacement is 0.83% per day.

At a recent discussion at the Biochemical Society Jope[12] pointed out that methaemoglobin rapidly disappears from the circulating blood after the causative agent has been removed. It is no longer detectable after about two to three days in circulating blood, while in drawn blood at room temperature it may disappear in as short a time as 24 hours. By contrast, sulphaemoglobin persists for many weeks. Jope consequently tried to measure the life of the red cell by studying, by accurate spectrophotometric methods, the disappearance of sulphaemoglobin from the blood of seven cyanosed T.N.T. workers over a period of four months. He assumed that the intact red cell cannot change sulphaemoglobin, and that the body has no other means of removing it except by removing the red cells themselves; that no sulphaemoglobin formation goes on after administration of the causative agent is stopped; and that the sulphaemoglobin is not incorporated into new red cells. In correlating the destruction of the red cells containing sulphaemoglobin with normal red cells it must further be assumed that the sulphaemoglobin is initially distributed at random among the red cells of all ages, and that sulphaemoglobin does not affect the length of life of the cell. These assumptions are all difficult to prove, but it seems fairly certain that they are true. The graph resulting from plotting the fraction of the initial sulphaemoglobin level against the number of days after removal of the worker from contact with T.N.T. produced a straight line cutting the zero sulphaemoglobin line at 115.4 days. This shows that these cells have a definite life span and are not subjected to indiscriminate destruction. These conclusions agreed closely with those of Callender, Powell, and Witts, who used the Ashby differential agglutination method. The incorporation of the N^{15} isotope into the protoporphyrin of haemoglobin in man after ingestion of 66 grammes of glycine with N^{15} in the amino-nitrogen position was studied by Shemin and Rittenberg.[13] Unfortunately their observations extended only 99 days after the ingestion of the glycine, but it is to be hoped that they will prolong them in order to establish whether this third method will confirm the findings of the differential agglutination and sulphaemoglobin methods of estimating the life of the red cell and prove that it is between 115 and 120 days.

Many attempts have been made to obtain fundamental information about blood diseases by estimating the life span of the red blood cell. Brown, Hayward, Powell, and Witts,[14] using the Ashby technique, showed that in simple diseases such as idiopathic hypochromic anaemia only a linear type of decay occurred, whereas in haemolytic anaemia the plotted results undergo considerable curvature and the average life of the cell is much reduced; and it is possible to analyse quantitatively the amount of pathological haemolysis in other types of anaemia. Dacie and Mollison[15] with this technique demonstrated that blood taken from a patient with familial haemolytic anaemia transfused to a normal patient was completely destroyed within 20 days, whereas normal blood transfused into five patients with haemolytic anaemia survived the normal time. Jope's method seems to be much simpler and more accurate than any of the methods so far employed, and it is certain that it will much facilitate researches of this nature and may lead to the discovery of much new and important information about diseases of the blood.

[12] In the press.
[13] *J. biol. Chem.*, 1945, **159**, 567.
[14] *J. Path. Bact.*, 1944, **56**, 81.
[15] *Lancet*, 1943, **1**, 550.

SOCIAL AND ECONOMIC PROBLEMS OF CHILD-BEARING

The need to obtain detailed information on social and economic aspects of child-bearing is urgent for two reasons. First, the health services are being remodelled, and if the environmental background is neglected the new maternity services will only incompletely fulfil the functions for which they are designed. Secondly, it is well known that Britain is facing a crisis in her population, and there are reasons for thinking that the medical and other costs associated with the birth of a baby may be a serious deterrent to parenthood, not for the lower income groups only but for all sections of the community. There is an excellent case for reducing the financial burden of child-bearing, but we have very little idea of how great this is, how it varies between different economic groups, or what proportion of the total expenditure is made up of medical fees, payments for extra domestic help, cost of clothing and other articles for the baby, etc. It is clear that knowledge on these points is essential if any attempt is to be made to remove the financial deterrents to parenthood.

With such considerations in mind the Population Investigation Committee and the Royal College of Obstetricians and Gynaecologists have formed a joint committee to inquire into the adequacy of the maternity services and into the social and economic aspects of child-bearing. It was realized that to obtain information, more especially on the social and economic side, a personal approach to the mothers themselves was necessary, and a questionary survey has therefore been planned which is scheduled to take place in May. If successfully completed the inquiry will provide information, unobtainable from any existing source, which will enable the joint committee to make informed suggestions as to the ways in which it is possible to help mothers with the social and economic problems that they meet in bearing children. This inquiry has the support and approval of the Royal Commission on Population, to whom the results would be of great value. It has been made possible by a grant from the Nuffield Foundation. The office is at 69, Eccleston Square, London, S.W.1.

If the results of the survey are to be generally applicable the information must be derived from a population of mothers which gives a miniature yet undistorted picture of all women in Britain now bearing children. The joint committee proposes to take for its sample all mothers throughout the country who have borne a child between March 3 and March 9 inclusive. These mothers will be interviewed eight weeks after the birth of their baby—that is, in the first week of May. This sample will be large enough to satisfy statistical requirements, and at the same time mothers of all groups will be represented in proportion as they contribute to the births of the nation. Maternity and child welfare authorities throughout the country have been asked to co-operate in the inquiry by permitting their health visitors to undertake the interviews. They have given a magnificent response to this request, and 96% of replies received so far have been in the affirmative. Clearly the inquiry is of great importance, and deserves the whole-hearted support of the local authorities, in whose hands its success or failure will lie.

RETROSPECT OF WAR MEDICINE

For reasons of security many achievements of medical science during the war could not be proclaimed at the time, and with the idea of making this work known the Royal Society of Medicine recently arranged a series of meetings extending over a fortnight. At each meeting some practical problem was discussed, and more than forty lecturers expounded the work on which they had been engaged. The field of clinical medicine was left untouched. From first to last during the fortnight penicillin and sulphonamide went unmentioned, and no reference was made to surgical advances.

The war subjected very large numbers of men and women to utterly abnormal conditions of existence; it also imposed upon them demands for efficiency and endurance far greater than the ordinary requirements of civil life. The R.S.M. discussions were largely an exposition of the way in which the human being became adapted to such stresses. The exposure of the body to extremes of tropical heat and arctic cold, to blast and missiles and flame, to the pressures which play upon the body of the airman as he manœuvres to escape or pursue the enemy, habitability in such environments as the galleys and machinery compartments of warships in tropical seas—all these were described, and the measures of protection and adjustment which had been worked out. The armour of the mediaeval warrior has been succeeded by special crash helmets to save the skulls of motor-cyclists and firemen, by asbestos clothing for protection against flame, by suits, some of them lined with water-filled bladders, for protecting the air pilot during centrifugal acceleration, by kapok-lined jackets worn under the diving dress to protect the diver in proximity to under-water explosions. In under-water blast the injury is almost invariably to air- or gas-containing viscera, and there may be no bruising or superficial injury such as is found with air blast. The varying procedures of personnel selection in the three Services were also described. The attention given to nutrition, the combating of fatigue, the training of the special senses, until, in the flying crews, a high degree of nocturnal vision was attained—all these were the subject of extraordinarily interesting demonstrations.

Many products of the wartime laboratory were brought forward, among them D.D.T., which with all its other uses has proved invaluable as a means of adult mosquito control. D.D.T. is often said to have been the means which aborted the typhus epidemic in Naples in mid-winter, 1943, but in fact this statement needs some qualification. The sudden collapse of the outbreak was due first of all to energetic measures put in hand slightly before the arrival of supplies of D.D.T., and the use of this substance, which offers an ideal method for dealing with an undisciplined population, completed the deliverance. Another paper was on British anti-Lewisite, known as "BAL," a compound which originated in Prof. R. A. Peters's laboratory at Oxford as a result of researches for the Chemical Defence Department of the Ministry of Supply. It has been used in the treatment of acute and chronic poisoning with therapeutic arsenicals, and, according to claims made in the United States, in mercury poisoning. The production of cotton-rat lung vaccine against scrub typhus was another remarkable story. Then there was an exposition of the use of amphetamine in the performance of psychomotor tests and in combating the heaviness and listlessness of those who have been deprived of sleep. On the homely subject of seasickness some investigations were brought forward which suggested that, in spite of the claims of many other remedies, hyoscine is still the most effective. In one series of tests, in dosages of 1.2 mg., it protected 73% of susceptibles. Its value in airsickness is less, though it is effective in some cases, but no known remedy will protect every susceptible person. Finally, the war having done its worst to torture and wreck the human frame and exhaust its reserves, the work at the rehabilitation centres to restore men to physical and moral efficiency was described. The Royal Society of Medicine is to be congratulated on arranging this symposium, and it is to be hoped that the forty papers will find some permanent record. All the speakers, with one or two exceptions, were medical men, and each was concerned with a special and often a narrow range of investigation.

SELF-DEMAND FEEDING OF INFANTS

The "self-demand method" of feeding infants is based on the fact that the baby is fed according to its demand for food rather than to any specific timetable.[1] [2] There are considerable variations in the number of feeds required and in the time intervals between them during the early weeks, but by the seventeenth week the child nursed on this regime appears to require the breast about three times in the twenty-four hours and rarely to need feeding at night. It is essentially a breast-feeding method, and is advocated on the grounds that it produces a closer co-operation and sympathy between the mother and child and that it is based on sound physiological principles.

Certain drawbacks are admitted to exist. In the first place the mother has to be in constant attendance on the child, and may even be forced to sacrifice her normal need for exercise, since she is never certain when the next feed will be. Secondly, and more important, is the fact that the only criterion by which the baby's demand for food can be judged is its crying. In a paper contemporary with the above C. A. Aldrich and others[3] point out that an analysis of the crying in 50 different babies showed that much of it cannot be related to any known factor; and that this unaccountable crying equals and often exceeds in duration that clearly attributable to hunger. Such being the case, it is not surprising that the advocates of "demand feeding" agree that it is extremely difficult to tell when a baby's crying indicates the need for food, and that time and thought are needed to form an accurate judgment. It would appear that even on the self-demand regime it is sometimes found opportune to avoid waking the mother and to rouse the baby and feed it if occasion arises. In practice the method is an intelligent extension of the system in use by skilled nurses in this country, where, in most cases, an effort is made to correlate the requirements of the infant with the well-being of the mother.

The cases published suggest that even selected mothers may find it difficult to interpret their infants' cries, and there is the disadvantage that an unskilled parent might pick the baby up and put it to the breast for the slightest wail or whimper. But a method which encourages an intelligent symbiosis between mother and child from birth onwards is clearly founded on sound principles and is a healthy reaction from the "laboratory" methods of infant management still sometimes met with.

According to a report in the *Times* for April 9 the second reading of the National Health Service Bill has, as a result of discussions between the Government and the Opposition, been postponed until the House of Commons returns from the Easter recess on April 30.

[1] Trainham, G., Pilafain, G. J., and Kraft, R. M., *J. Pediat.*, 1945, **27**, 97.
[2] Simsarian, F. P., and McLendon, P. A., ibid., p. 109.
[3] Aldrich, C. A., *et al.*, ibid., p. 89.

NAPLES TYPHUS EPIDEMIC, 1942–3

[AS SEEN BY AN ENTOMOLOGIST]

BY

H. J. CRAUFURD-BENSON

Late Lieut.-Col., R.A.M.C.

Busvine (1945), reviewing recent work on the louse, *Pediculus humanus* var. *corporis* de Geer, stated that the standard method of delousing consisted of dusting fully clothed individuals with D.D.T., using hand- or power-operated dust-guns. Chalke (1945), confirming this statement, explained that the method of mechanical dusting was evolved by the Rockefeller Foundation louse research team, put into practice for the first time in Naples, and that it was the method of delousing which was the secret of success because large numbers of people could be rapidly treated without being undressed. Chalke remarked, too, that the epidemic was not controlled entirely by the use of D.D.T.

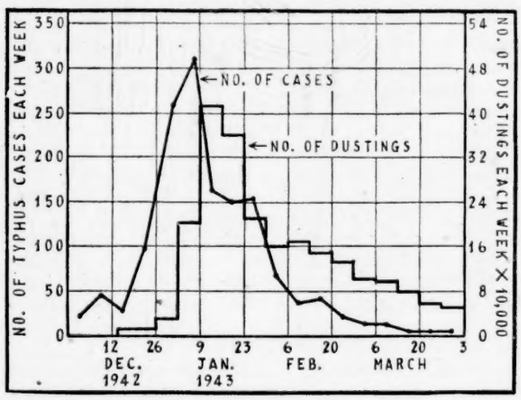
It is perhaps the correct moment, as more and more is published concerning this epidemic, to bring forward the evidence upon which the above statements were made. I was in Naples as an official military observer of the louse control methods used, and am indebted to those who gave me every facility to study the problem, and more particularly to Lieut.-Col. Chalke, R.A.M.C., the senior British hygiene officer in Naples, Brig.-Gen. Fox and Col. Bishop of the U.S. Typhus Commission, and Dr. Soper of the Rockefeller Foundation.

Brief History of Epidemic

Cases of typhus occurred sporadically until the beginning of December, 1942, when it became apparent that an epidemic was likely. The Rockefeller Foundation Research team arrived on Dec. 15, and immediately organized the case-finding teams, each with a medical officer, and case-contact delousing teams. The term delousing used here refers to the application of louse powder by dust-guns to the fully clothed individual; steam and hot-air disinfestation were not used except at hospitals receiving typhus cases. The case-contact delousing was the delousing of the typhus patient, members of the household, and inhabitants of the surrounding houses and flats—i.e., "block" dusting to stop the spread of the disease from the known cases. Throughout the epidemic such dustings averaged approximately 2,000 a day.

On Dec. 27 the dusting of the inhabitants of air-raid shelters started, and eventually covered 311 shelters on a rota system. On Dec. 28 the first public delousing centre was opened, and by Jan. 6 twelve were in operation; eventually twenty-nine stations were opened. The U.S. Typhus Commission arrived in Naples on Dec. 28, with a consequent immediate expansion of all services, and inoculation was begun as a preventive measure.

The course of the epidemic is shown in the Graph, where the weekly typhus rate is plotted together with the weekly total of



dustings. The typhus rate rose sharply in the third week of December in typical epidemic fashion, though the rise was to some extent augmented by the case-finding teams discovering unreported cases. The peak was reached in the week ending Jan. 9, the highest number of cases recorded in one day being 63 on Jan. 8. The typhus rate then fell to a level of 150 cases a week and remained constant for three weeks, indicating that the epidemic had been successfully checked. Towards the end of January a new rise in the typhus rate was expected in accordance with the usual periodicity seen in the early stage of an epidemic; actually the rate remained low and in early February started a steady decline. It is extremely unlikely that it was self-limiting, because the conditions within the city, and of the civil population, were bad and conducive to an epidemic; it is surprising that no other epidemic occurred.

Evaluation of Louse-control Measures

Before attempting to evaluate the methods used it is essential to realize that the outstanding feature was the mechanical application of louse powders to fully clothed individuals. While the method does not ensure complete disinfestation in one treatment, as is obtained with steam or hot air, it does permit of the general reduction of lousiness of a large community in a short space of time, and on a scale that is impossible with any other method. This point is sometimes overlooked. It has revolutionized our ideas on the control, as well as the prevention, of lousiness. In Naples a total of 2,759,000 dust treatments were given up to the beginning of April, 420,962 in the heaviest week ending Jan. 15, and 69,426 in the heaviest day, Jan. 12. (These figures refer to the city only and exclude treatments given in the surrounding towns and villages.)

There were two distinct phases in the breaking of the epidemic. First, the outbreak had been checked and partially controlled by Jan. 9, and, secondly, was completely controlled by Feb. 6. Louse powders were used to destroy the vector, but because of the incubation period of the disease (approximately twelve days) and the delay in finding cases (usually five days after the onset of symptoms), the effect of delousing could not be reflected in the daily typhus rate until sixteen to eighteen days after application of the powders. Therefore to determine the significance of these dates it is necessary to consider what occurred before Dec. 23 and Jan. 21, respectively.

From Dec. 15 to Jan. 1, 52,000 dustings were done, 32,000 being case-contact treatments. In this period the Rockefeller Foundation were working alone until the Typhus Commission arrived on Dec. 28, so that no other large-scale measures could be adopted. Further, in this period over 90% of the louse powder used was MYL, the American powder containing pyrethrum (Davis and Wheeler, 1944); the remaining 10% was D.D.T., but this did not become available till near the end of the month. Thus the epidemic was checked and partly controlled by the closely associated case-finding and case-contact delousing services ("blocking" of the typhus case) using MYL louse powder. From Jan. 1 10% D.D.T. in talc was used exclusively by all civilian services. It is impossible to say which method contributed most to the successful outcome, but credit can be given to the efficiency of the D.D.T. powder.

The armies in Naples were in a special position relative to the civilian population, being highly organized, almost independent of the civil administration, and therefore in a position to rely upon preventive measures. The measures adopted by the British Army depended upon three principles. First, the avoidance of contact with the source of infection by placing cinemas, restaurants, etc., out of bounds to troops; second, protection of the individual soldier by inoculation and the weekly use of the original A.L.63, containing derris and naphthalene (Craufurd-Benson and McLeod, 1946); and, third, close supervision of the hygiene of the troops, supported by propaganda. It is impossible to say which of these principles was the most important, but the astonishingly low incidence of pediculosis in the area during January and February is evidence of their effectiveness. There were two cases of typhus, and both men had been in close contact with civilians and were found to be lousy.

An interesting sidelight on the efficiency of A.L.63 was provided by the treatment of civilians employed by, and in close touch with, the Army. The 20,000 regular employees were treated every fortnight with A.L.63 by special Army dusting teams, and no case of typhus occurred amongst them. There were a number of cases among the 25,000 labourers who could not be treated regularly.

Summary

An analysis of the Naples epidemic from an entomological point of view shows that the outstanding feature was the mechanical application of louse powders as a means of delousing fully clothed individuals, and reducing the general level of lousiness in a population. This made it possible to disinfest large numbers of people quickly and on a scale previously considered impossible.

Furthermore, the correct application on a large scale of any satisfactory louse powder, irrespective of the individual merits of the powder, will achieve the desired effect. Three louse powders were used—namely, MYL, D.D.T., and A.L.63—and each contributed to the successful result.

It is also apparent that a modern army, properly equipped and protected by inoculation, can live in the midst of an epidemic without serious interference with its work.

The importance of the immediate deployment of a combined or closely linked case-finding and case-contact delousing service must never be overlooked; also the quick deployment of a special organization similar to that of the U.S. Typhus Commission, which is essential for the rapid control of an epidemic. It is understood that these aspects of the measures adopted in Naples will shortly be published.

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LONDON DOCTORS AND THE BILL

MASS MEETING AT HEADQUARTERS

The first London mass meeting of practitioners, arranged by the Metropolitan Counties Branch Council of the B.M.A., was held in the Great Hall of B.M.A. House on April 4. Although short notice had been given the hall was crowded to excess, with many sitting on the floor or standing during the two hours of the proceedings. Sir Crisp English was chairman, and Dr. Charles Hill, Secretary of the Association, was the speaker. Dr. Hill followed the same line of argument as in his earlier addresses in various towns, giving first a factual summary of the Bill and then proceeding to points of criticism. A factual summary, he said, was the more necessary because the White Paper, which claimed to be such a summary, was either something more or something less in that there were important proposals in the Bill which it omitted, while it dealt with other subjects which were not in the Bill.

Tersely Put

Instead of attempting to summarize a seventy-minutes address, which was received with enthusiasm and without any sign of dissidence, we give some of Dr. Hill's points.

"Those who maintain that our profession is obstructive and stands in the way of a better health service either do not know the facts or are wilfully misrepresenting them for their own purposes."

"It is wrong to say our opposition is unqualified. The Bill is an amalgam of good and bad. For example, the proposed hospital service is an imaginative scheme which in its regional aspects will meet with the approval of the profession as a whole."

"But it is unnecessary for the Minister to proceed to actual ownership of hospitals. All the power he requires is his by virtue of control of the purse. If a hospital is to hold its rightful place in the community and remain a centre of local pride and affection it should be locally owned and not become a State establishment."

Then the general practitioner service—

"To divide the loyalty of the family doctor between the patient and some superior and appointing body is not in the public interest."

"We must examine the proposals in relation to principles and not to compensation or remuneration."

A Succession of Interrogatives

"Is the ownership of goodwill in practices essential or important in the preservation of the freedom of the individual doctor?"

"Is it right and proper that a man who has satisfied the requirements of the General Medical Council shall be dependent upon the decision of a body appointed by the Minister before he can set up in public service in the area of his choice?"

"Is it possible that in fact practitioners who for one reason or another are unacceptable to the interviewing committees will go from area to area seeking openings and finding none?"

"Might it mean that practitioners may get on to the *Medical Register* and yet be unable to earn a living?"

"Will it impair the chances of women practitioners?"

"Is it conceivable that 66 millions of taxpayers' money is to be paid and that *laisser-faire* methods of distribution will follow? The compensation proposal must be examined with the proposals for the distribution of general practitioners."

"Whatever subtleties may be involved in the compensation-cum-distribution proposals it does not need a leap of the imagination to appreciate that if general practitioners are to be remunerated in substantial part by salary much of the journey to whole-time salaried service has been travelled."

As for health centres—

"There may be marble halls with chromium fittings and platinum blondes, with bigger and better queues, but it is well to be aware of the danger that with medicine so institutionalized the personal touch in family practice may be lost."

"This is not one administration, but three administrations—it is fragmentary, compartmental, splinter administration put forward with the adjective 'comprehensive.'"

"It may be that the Government will not be deterred by any Parliamentary pressure which can be brought to bear. But after we have been sufficiently depressed by contemplating that possibility, let us remember that no Government can bring into being any health service without the co-operation of the profession. (Loud cheers.) That is not a threat. It is my business to state the facts that we must bear in mind."

In conclusion Dr. Hill declared:

"Never before has our profession stood in greater need of leadership and of unity. The leadership the Association will provide, the unity must come from the ranks."

Public Relations

Questions were invited at the close of the address. Many of the questions had to do with public relations, on which Dr. Hill hoped that he would not be pressed too far, but with expert advice a great deal was being done in this field. As an example of what could be done locally he mentioned Stoke-on-Trent, where forty public meetings had been arranged, to be addressed by members of the profession. One member, whose "blood boiled" at the *Punch* cartoon of the doctors in the arena *Morituri te salutant*, urged the use of the services of the cartoonist and poster artist. Criticism was also made of part of a news reel in which, it was said, the doctor's case was misrepresented. Dr. Hill explained that this form of propaganda was invited, but in the result the Association's case was embedded with other matter for which the Association had no responsibility, so that a misleading impression was given. Of the press in general Dr. Hill said that many organs had given the profession's case a very good showing, though there were some lamentable exceptions. "There is a widely read and respected paper in a Northern town which seems consistently determined to see no good in our profession and to criticize it in all circumstances, and there are members of our profession who for political purposes are perfectly willing to belittle it." There was cheering at this remark, and Dr. H. B. Morgan, Labour M.P. for Rochdale and member of the Association Council, who had raised the question, asked that Dr. Hill should make it clear that the last remark did not apply to him. Dr. Hill immediately replied that his remark certainly did not apply to Dr. Morgan, who had consistently given very wise and useful advice to the Council in the presentation of a point of view which he did not wholly share.

Future Action

One member of the audience asked for explicit advice on what to do in the event of the proposals not being modified. "I want," said Dr. Hill, "to give a plain answer. I do not think the profession at this moment is in a position to exercise a fair judgment which would bind it as to what it would do

in the event of the Bill going through in its present or an amended form. Our present job is to try to get these proposals modified. If we fail, then the individual member, seeing the final result in black and white, will be able to judge for himself. It would be a mistake to reach such a decision now. But the time would come for a decision. We are taking the necessary steps in preparation for that time by giving the profession an opportunity over a sixpenny stamp to manifest its solidarity. Guarantees are the language of the moment. Don't let us be manœuvred into making now a decision which we shall have to make—and shall make—in the autumn of this year. From then it will be at least a year, probably eighteen months, before the appointed day—long enough to reach decisions; long enough, indeed, for enthusiasm to cool.

"We shall have to achieve more unity than exists to-day when we contemplate that position. One wants to see a little less detailed interest in the global sum, a little less interest in the amount of remuneration, and a more solid determination to rest on principles."

He added that, while £25 had been suggested as a possible sum for individual guarantees, it was hoped that the established practitioner would regard £100 as nearer the expected sum, and that the newly qualified practitioner or any other who could not conveniently afford a £25 guarantee would not hesitate to guarantee a smaller sum.

Asked to say that there was much in the administrative structure of the Government scheme which the B.M.A. had been urging for years, Dr. Hill agreed that the objective of a comprehensive health service commended itself, as did the proposal to plan all hospitals over natural hospital regions and the proposal that the contracts of general practitioners should be with local executive councils; "but we should beware lest our gratitude on points of administration obscures our general dislike of the proposition which would lead to the conversion of the profession into a salaried branch of Government."

The meeting ended with a vote of thanks for what Sir Crisp English called a "magnificent speech."

BRITISH POSTGRADUATE MEDICAL FEDERATION

LONDON A MEDICAL MECCA

Sir Francis Fraser, late Director-General of the Emergency Medical Service, has just been appointed Director of the newly formed British Postgraduate Medical Federation. The Federation has not yet received its charter, but its creation represents a first step in the fulfilment of some of the more important recommendations of the Goodenough report.[1]

The Goodenough Committee recommended that the British Postgraduate Medical School "should be reconstituted as a federal organization embracing not only the departments and teaching organization which are attached to Hammersmith Hospital and which at the present time constitute the school, but also a series of institutes in the various special subjects, each institute being based on the most suitable special hospital in its particular subject."

The British Postgraduate Medical Federation is the federal organization envisaged in this proposal. One institute already exists as a Central Activity of the University—the Institute of Child Health, based on Great Ormond Street, with Prof. Alan Moncrieff in charge. The British Postgraduate Medical School, which was incorporated by Royal Charter in 1932, will require a supplemental charter to make it one of the constituent bodies on the Federation. New specialist institutes will be incorporated under the Companies Act before being included in the Federation.

New Specialist Institutes

Institute of Laryngology and Otology.—This institute has Mr. C. Gill-Carey as a part-time dean, and teaching is being carried on at the Royal National Throat, Nose and Ear Hospital in Gray's Inn Road and at Golden Square.

[1] Report of the Interdepartmental Committee on Medical Schools, 1944. London: H.M. Stationery Office.

Institute of Ophthalmology.—The medical school at the Royal London Ophthalmic Hospital, Moorfields, has been reconstituted, with a separate committee of management and an academic board, as the Institute of Ophthalmology. The hospital has entered into an agreement with the Central London Ophthalmic Hospital, and the combined staffs, clinical material, and accommodation are available for the purposes of the institute. Other ophthalmic hospitals in London will probably co-operate in the near future. Mr. R. C. Davenport has been appointed part-time dean of the institute, and developments in the arrangements for teaching and research are being planned. The location of the institute at Moorfields is not satisfactory, but it must be some time before a more central site and new buildings can be obtained.

Institute of Neurology.—Difficulties have been experienced in constituting this institute separately from the National Hospital, Queen Square, which is directed by its charter to provide for teaching and research. It is hoped to overcome these shortly. The institute will be taking over an active school of research and postgraduate teaching, but requires financial help to develop further its clinical and pathological departments.

Institute of Psychiatry.—In adopting the plan for the development of the Federation and its constituent institutes the Senate of the University agreed that no action was required at present to include the Maudsley Hospital Medical School in this scheme, as it was already a school of the University and would require special consideration because of its relation to the London County Council. Its inclusion later as an institute of psychiatry is desirable.

Institute of Dermatology.—St. John's Hospital for Diseases of the Skin had its accommodation destroyed by bombing. Negotiations are proceeding satisfactorily for the temporary housing of the school at University College Hospital Medical School and for in-patient accommodation at a municipal hospital. It seems probable that a start can be made to form an institute of dermatology some time this year.

Other Special Hospitals

It is hoped that other special hospitals at which clinical teaching of an approved standard is provided and which may be required for specialist training will be associated with the Federation. Institutes may be established later in connexion with some of them; they will be encouraged to offer courses of instruction in the specialty concerned, and their registrar posts may be approved for part of a specialist training. The hospitals in question are: (1) Hospital for Consumption and Diseases of the Chest (Brompton); (2) National Hospital for Diseases of the Heart; (3) St. Peter's Hospital for Genito-urinary Diseases; and (4) Royal National Orthopaedic Hospital.

In addition to these hospitals associated with the Federation for postgraduate training in the special branches of medicine and surgery it will probably be advisable to include some of the general hospitals in order to provide clinical material in general medicine, general surgery, and obstetrics, over and above that already available at Hammersmith. Arrangements have been made for clinical facilities at St. James' Hospital (L.C.C.), Redhill County and North Middlesex Hospitals (Middlesex C.C.) for postgraduate students, and it is hoped to make similar arrangements with Queen Charlotte's and the Chelsea Hospital for Women.

General Policy

The long-term policy of the new Federation is to fulfil three functions: (*a*) the provision of facilities for the training of prospective consultants and specialists, supplementing the work of the undergraduate medical schools; (*b*) instruction of medical practitioners, other than those training to be specialists, who require advanced instruction in any branch of clinical medicine; (*c*) organizing postgraduate education for general practitioners.

Its central office has already started work and is at 2, Gordon Square, London, W.C.1 (Tel.: Museum 6616). At the moment it is concentrating on giving assistance to recently demobilized medical men who are anxious to undertake postgraduate train-

ing under the Government scheme. Later it is hoped that the British Postgraduate Medical Federation will become one of the most important postgraduate training centres in the world. Because of its large population and wide area London has long presented unrivalled opportunities for the study of clinical material. Hitherto, although certain institutions have had world-wide fame, London as a whole has not attracted those seeking higher medical qualifications or opportunities for research work as much as it might have done, largely through a lack of central co-ordination. The new medical federation should go far to remedy this.

THE L.C.C. AND THE HOSPITAL SERVICE

The National Health Service Bill and the proposed co-ordination into one unified system under national ownership of the voluntary and municipal hospitals was the subject of debate at the meeting of the London County Council on April 2. Answering criticisms by Sir Harold Webbe, leader of the opposition, Lord LATHAM said that they all regretted—who would not?—that the hospital functions of the Council were to come to an end, but if their sacrifice was the price of the nation's good they would not grudge it. He did not like *ad hoc* authorities, but the regional boards would include a fair number of elected representatives from the various local authorities in the region.

Dame BARRIE LAMBERT said that the L.C.C. had always determined to have a service equal in every way to the voluntary hospitals, and its hospitals were admitted by everyone to be on a very high level of efficiency. The Minister of Health had agreed to place certain hospitals—namely, the teaching hospitals—in a preferential position. They would be allowed to keep their own funds and almost encouraged to collect further funds. Why could not this preferential treatment be extended to other hospitals of acknowledged efficiency?

Sir PERCY HARRIS, speaking for the Liberal element on the Council, described the Bill as a great constructive measure, the inevitable corollary of national insurance. But as for the transfer of hospitals, while he recognized that there were areas where the population was too scanty and the local authorities too poor to provide an adequate service, that did not apply to the County of London, and he saw no reason for uniformity whereby the L.C.C. hospitals were dealt with in the same way as all the others. What was urged by the Government with regard to hospitals might equally be urged with regard to schools, but if it was important to preserve the principle of local government for education it was of even greater importance to preserve it in dealing with the sick and the mentally infirm. Someone had said that "good government is no substitute for self-government."

Mr. SOMERVILLE HASTINGS said that the National Insurance Bill—a measure of universal application—made it necessary to have a health and hospital scheme completely different from the scheme in the original White Paper. The National Insurance Bill would be grotesque if there was not a health service which was equally good everywhere. The Minister had reached the not unreasonable conclusion that the only way of obtaining such a service was to provide it under his own powers. An alternative would have been to leave the local authorities in entire charge. That might have worked very well in London, but what about other parts of the country? What about the counties, only about half of which had so far taken their hospitals out of the Poor Law? It might be asked: Why not have left the service mainly in the charge of the voluntary hospitals? He had spent more time in his life within the walls of a voluntary hospital than anywhere else, and he would be the last to decry the splendid work they did, but that work depended on equipment and staff, and for equipment the money was not forthcoming. Staff were appointed nominally by the board of management, but in many country districts a job on the staff of a voluntary hospital was to all intents and purposes bought and sold. Voluntary hospitals had done valuable work in the past, but was there anything sacrosanct about the voluntary principle? Another alternative would be to let both systems of hospitals remain. But it would be absurd to have two armies fighting a common enemy. Besides, how could a highly endowed hospital system be controlled by merely withdrawing grant? He felt that the Minister, in regard to hospitals, had only one course to take—namely, to take over the hospitals required for a unified service and run them as a whole. The experience of the L.C.C. in running its 76 hospitals had surely taught the value of unification. It made possible the common purchase of supplies, which ensured quality; it made possible the standardization of articles to be used in hospitals, so that every needle and every syringe would fit together; in an epidemic a unified system made possible a quick allocation and transfer of beds for the purpose needed; above all, by far the greatest value of a large unified system was the possibility of specialization, the concentration of cases of a particular kind at a small number of centres.

An amendment by Dame BARRIE LAMBERT that the L.C.C. should be constituted by statute the authority for planning, controlling, and administering the new National Health Service throughout the Administrative County of London, and protesting against the declared intention of the Minister to transfer the control of London hospitals from an elected to an appointed body, was lost, and the report of the Labour majority acquiescing in the Government's proposals was carried after a four-hour debate.

PAPWORTH LUNCH

The Papworth Village Settlement gave a lunch in honour of a small delegation of French medical men on a visit to this country to study British methods in the treatment of tuberculosis—Dr. Courcoux, Secretary-General of the Société de la Tuberculose, Paris; Dr. Berthet, Director of the Regional Centre of Health Education, Grenoble; and Dr. Chadourne. Among those present to welcome them were the Duchess of Portland; Air Commodore R. R. Trail, honorary medical director of Papworth Village Settlement; and Mr. J. E. Bidwell, chairman of the Papworth committee of management.

In a short speech of welcome Mr. Bidwell said that Papworth was founded upon the belief that it was useless to treat tuberculosis and then to throw the person back into the conditions which produced the disease. Their aim had always been first to provide up-to-date medical and surgical treatment, and then to offer employment in suitable conditions. In 1918 Papworth accommodated 25 patients; now they were able to look after 500. He concluded with a tribute to the founder of Papworth, the late Sir Pendrill Varrier-Jones.

Replying in French, Dr. Courcoux extended on behalf of the French Minister of Health greetings to the representatives of the Ministry of Health, Dr. Norman Smith, and of the London County Council, Sir Allen Daley and Dr. F. Heaf. They had, he continued, "received an indelible impression of that extraordinary place, Papworth." They had been struck not only by the high scientific quality of the medical and surgical work but also by the way in which the dignity of the patient was maintained. In France they, too, were concerned to prevent their patients from becoming idle; they wished to restore them to work, and Papworth would be their best guide.

JOINT TUBERCULOSIS COUNCIL

At its last meeting the Joint Tuberculosis Council elected Dr. D. P. Sutherland, senior tuberculosis officer, Manchester, as chairman for the current year. A report suggesting some changes in the definition of terms employed in tuberculosis work was approved and ordered to be forwarded to the Ministry of Health and the Department of Health for Scotland for their observations. A resolution was adopted stressing the value of the financial provisions for tuberculous patients (Memorandum 266/T) and deploring the omission of similar provision from the National Insurance Act. A deputation was appointed to wait upon the Minister of National Insurance and the Minister of Health to urge the Council's views.

The Council received, with gratification, a letter from the Ministry of Labour and National Service stating that the Minister had instructed his officers not to submit any girl under the age of 18 for training or employment in tuberculosis nursing. A memorandum on the teaching of tuberculosis to medical students, issued by the new Tuberculosis Educational Institute, was received, and the Council approved the following suggestions: (1) That physicians in charge of dispensaries and medical superintendents in charge of sanatoria should be appointed lecturers in medical schools situated in their areas. (2) That medical students should be attached to tuberculosis dispensaries as clinical clerks. (3) That facilities should be made available for short periods of residence at sanatoria for medical students wishing to make a further study of tuberculosis.

The Minister of Health announces a further scheme for financial assistance from the Government to State-registered nurses who wish to take a whole-time course of training as health visitors.

Reports of Societies

MALARIA IN WAR

The Campbell Memorial Oration was delivered before the Ulster Medical Society in the Whitla Medical Institute, Belfast, on March 28, by Brig. J. A. Sinton, V.C., whose subject was "Malaria in War." The president of the Ulster Medical Society, Mr. H. P. Hall, introduced the orator as a famous graduate of Queen's University, who had won the V.C. in the first world war and had recently been elected Fellow of the Royal Society. This double honour was probably unique. Sir Thomas Houston presented the Memorial Medal to the orator.

Brig. Sinton opened by recounting the ravages produced by malaria in the various wars during the centuries. In the tropical and subtropical fighting of the first world war from three to ten times more casualties were caused by disease, mainly malaria, than by enemy action. In 1880 Laveran, a young medical officer of the French Army, first discovered the malaria parasite in the blood, and in 1894 Ronald Ross, an Indian Army doctor, discovered its transmission by the mosquito. The speaker went on to describe the factors involved in the prevention of malaria. He described, first, the defence against the mosquito bite with chemicals, such as citronella lotion and later D.M.P., and mechanical defences, clothing, nets, etc. The chief environmental measure was the choosing of a healthy camp site. If a bad site had to be chosen it must be made healthy. The first antimosquito measure was spraying with a pyrethrum compound. When Japan entered the last war the supply of pyrethrum was largely cut off, so intensive research began, and this resulted in the widespread use of D.D.T., which killed the adult mosquito and the larva. Its great advantage was its persistence for long periods. The attack on the larvae was directed against collections of water, which were its breeding places, by drainage, filling, agitation, and larvicides. Oil was extensively used as a larvicide in the last war, but became very scarce. It was later found that D.D.T. in oil was thirty times more potent than plain oil, so very much less was required. The arsenical, Paris green, was also used. This was spread by aeroplanes and so could be used in advance of the troops. Man-made or animal-made breeding places had to be prevented or dealt with.

The susceptibility of the human host was next discussed, and the attack on the disease-producing parasites with quinine and mepacrine. When the Japanese overran Java quinine became very scarce, so widespread research on mepacrine was undertaken. For suppressive treatment mepacrine produced marvellous results when adequate and regular administration was insisted upon by very strict orders. The orator gave great credit to all the laboratory workers, military and civil, and to the many volunteers who allowed themselves to be infected. He concluded by saying that the antimalaria organization perfected during the last war would confer great benefits on the civil population all over the globe.

A vote of thanks to Brig. Sinton was proposed by Prof. W. J. Wilson, and seconded by Dr. J. C. Rankin.

A preparation of dimethylphthalate (D.M.P. for short), the substance used during the war against the mosquito, has been found to be effective against midges. Over fifty tests with D.M.P. in pastes, lotions, and emulsions have been carried out under the auspices of the Scientific Advisory Committee of the Department of Health for Scotland in midge-infested districts in the Highlands among outdoor workers and hospital staffs. The preparation found most satisfactory up to the present is an emulsion made up of: Lanette wax SX 5 g., triethanolamine 9 ml., oleic acid 27 ml., dimethylphthalate 100 ml., water 100 ml. Smeared on the exposed parts this emulsion will ward off midges for at least two hours. It is not injurious to the skin, though there may be some slight tingling when it is first applied and afterwards when washing the face; it should be kept away from the eyes and should not come in contact with tortoiseshell or plastic spectacle frames. If no manufacturing difficulties intervene, this anti-midge emulsion may be on sale to the public this season.

Correspondence

The Health Service Bill

SIR,—Dr. Alfred Cox's letter (April 6, p. 541) raises the point that was immediately apparent to me on reading through the White Paper summary of the Bill. But he does not stress his point enough.

The Minister will become, in fact, a complete dictator, little different from Hitler in National-Socialist Germany. Actually the Minister is, by inference, so mentioned no fewer than 53 times in the short White Paper summary. Dr. Cox omits to mention the worst feature of all, which is apparent in the Bill itself but not in the summary, which, as other correspondents have pointed out, is both inadequate and inaccurate—namely, that the Minister is at liberty to alter terms of service without consultation with or reference to the profession, collectively or individually. A contract in the legal sense therefore does not exist. And there is perhaps a still worse feature of the Bill than this: Governments alter, and with them their appointed, not directly elected, Minister of Health. The present Minister may be a man of reason; there is no knowing what his successor may be. In practice, of course, the service would have to be administered by a bureau of civil servants in whom would be vested these immense powers at present envisaged as accruing to the Minister, and I cannot think that we, the profession, can accept such a matter lightly.

The history of this great country with its unique Constitution has been an example of political progress for the past 500 years. There have been setbacks from time to time, but the big leaps forward have always been when civic rights have been further vested in the mass of the common people, as in the Magna Carta, the Bill of Rights, and the Reform Bill. This present Bill, as now constituted, cannot be other than a retrograde step in our history. Mr. Aneurin Bevan has recently been reported as protesting that "there will be no limitation on the civil liberties of people working in the National Health Service. The structure has been so devised as to leave civic rights entirely undisturbed" (*Sunday Times*, April 7). This statement is plainly untrue. And how does Mr. Bevan reconcile this opinion with the fact that he refuses even to discuss the Bill with accredited representatives of the profession? The present Bill will have to be very radically altered before it is acceptable to the profession as a whole and by the more intelligent and far-seeing members of the public, most of whom—among my own acquaintance—are even more disturbed by its possibilities than are the doctors.—I am, etc.,

Bletchingley. DOUGLAS ROBERTSON.

SIR,—The circular which doctors have been asked to distribute is disappointing in that it presupposes the profession willing to accept a Government-run service. This is far from being the case and, in fact, contrary to the wishes of most of the doctors in the country. Nobody should know better than we that, once deprived of our practices, we should be at the mercy of any political party in office and that our terms of service could be changed overnight. The non-medical public is beginning to view the proposed service with apprehension; at last it is beginning to suspect a political motive behind the scheme.

Now is the time to release a flood of propaganda—real active propaganda, not the feeble effort we are distributing at the moment—and to back it up with a proposal that, given the same funds, we are able to run a universal service better, more comprehensive, and above all more personal than anything envisaged by a Government Department. A month of such effort and we should not want for funds to fight the National Health Service Bill.—I am, etc.,

Knighton. G. H. H. BOOTH.

SIR,—Everyone must welcome the call to arms issued by the B.M.A. One can only regret that this step was not taken years ago when its effect would have been much greater. Even yet B.M.A. policy seems to lag behind the realities of the situation. So far as we know, it consists of "refusal of service" under the new Act. If action is delayed until the Bill becomes law, it is not the Minister but we who will be defeated. Under the Act

not only will the N.H.I. disappear but also the Public Medical Services, private practice, and most, if not all, appointments will become redundant. What remains of private practice will be so limited in every way by the heavy contributions, direct and indirect, to the Government scheme that it will not be sufficient for us to exist on. If we are to strike we must strike now while these resources are still at our disposal. Let the B.M.A. now call on every insurance practitioner to give in his notice not later than June 30; let it call on every practitioner and every hospital to refuse after Sept. 30 every medical certificate of any kind except death certificates and those relating to pregnancy and such items as milk and eggs, etc. The Minister may think it worth while to consider his position. If we wait till the Bill is through Parliament he will laugh at us. It is literally a case of "now or never."—I am, etc.,

Andover. J. A. BALCK-FOOTE.

SIR,—On reading the report upon the White Paper by the Council of the B.M.A. I was impressed by the firmness of its criticism, and was even prepared to risk the financial embarrassment of trusting to others a sum of money which, to me at any rate, is not inconsiderable. Last Sunday I attended a provincial B.M.A. meeting. Many people spoke, and two asked for opinions of younger members of the profession; perhaps they had taken care to ascertain that such members were in a minority. At all events one or two did speak, making the point, among others, that many had, either intentionally or in error, misread the Bill, and were grossly exaggerating the power of direction, and that such control of distribution by negation, and only on one well-specified reason being satisfied, would but protect the doctor against choosing an over-doctored district. Arguments such as this received much applause, but the good which they did was soon undone by the overwhelming tumult which greeted themes such as, "What will my compensation be worth to me when I die?" "I want to be able to do as I like when I like with my practice and my patients" (notice the possessive applied to the poor public); and "What is to become of me if I don't join the service?" Admittedly the evils of a medical civil service are great: we all know that; but to hear these same themes "tub-thumped" out by speaker after speaker was little but nauseating.

After the first vote convinced me that my ears were not deceiving me I left the hall in disgust, firmly resolved not to trust my precious cash to sponsors of such "dog-in-the-manger," "Blimpish," and selfish dogmas as this "revivalist meeting of the old brigade" was revealing; for such an attitude, irrational, unreasoned, and miserly, has done, is doing, and in the future will do nothing but untold harm to the prestige of the medical profession in the eyes of Government, Press, and public. I am *not* a Socialist, and have no connexion of any sort with any Socialist or allied organization.—I am, etc.,

Glasgow. ANTHONY A. VICKERS.

SIR,—All practitioners will now have received the Summary of the Proposed New Service, National Health Service Bill (Cmd. 6761), and the B.M.A.'s comments thereon. We should now ask ourselves two questions. (1) Has the Government of a democratic country like ours the right to compel 100% of its citizens to insure themselves from "womb to tomb"? The answer, of course, is "Yes," if it has a mandate to do so. But has it? My impression is that the public are supremely ignorant and apathetic about the whole scheme. They are caught, or about to be caught, on the old hook of "9d. for 4d." or "something for nothing." (2) Has the Government the right to compel one particular minority class of the community—in this case the medical profession—to become civil servants under threat of duress by confiscation of capital and goodwill, and, possibly, by other forms of persecution?

These are the fundamental questions. After two wars for freedom and democracy we are now confronted in this Bill, under the guise of democracy, with the most totalitarian measure it is possible to conceive. Now, after the muzzling of our representatives, the cat is out of the bag. Now is our opportunity, and it may well be our last, to perform our bounden duty as a profession by refusing to "negotiate" (*sic*) the matter any further, and to register a united and decided "No," not only in our own and our patients' interests, but in the interests of other professional minorities, who may be on the list for "nationalization" later on. Let us crouch no longer like mesmerized rabbits or be stupefied by the "inevitability" and other fifth-column propaganda. Why negotiate with people who have consistently exploited the profession and the voluntary hospitals since 1911, who indulge in unilateral breaches of contract—e.g., the 10% cut and the raising of the income limit to £420 without consultation—and who even now fail to implement their promise to revise the capitation fee "from the ground up"? Once bitten, twice shy.

It will be obvious that I disagree entirely with B.M.A. policy, and I always have done, and with every other policy or scheme which does not guarantee our complete professional freedom and our civil rights as citizens. But I still remain a member, now of some 32 years' standing, because I believe in unity. It is not the B.M.A. I blame. They must find it difficult indeed to lead such a divided profession as ours, who do not appear to know whether they are coming or going, or what they do want. Let us not deceive ourselves or be deceived by crafty baits: no scheme—call it national insurance, comprehensive medical service, or what you will—which is to embrace 100% of the population could ever possibly be worked unless the doctors were civil servants; and that, we are all agreed, would be disastrous for British medicine. Where, therefore, is the need for such a revolutionary and costly change at a time when we as a nation are gasping for financial transfusion?

For obvious reasons I am glad to be able to write this before any actual figures of remuneration or terms of service have been published. We may be certain they will not be startlingly attractive, but that is not the point at issue at the moment. It is the totalitarian nature of the Bill, described in the *Times* of March 26 by Sir Bernard Docker as a "mass of mechanism in which the patient will get caught and mangled" and a "mass murder of the hospitals," which we should fight, and at once, and to do so successfully a united front is imperative. If we cannot achieve this we shall deserve all that is coming to us.

The answer to question No. 2 is "No"; we cannot be compelled. We can refuse to accept service. If 50% of those on the active *Register* followed this course it would, I believe, kill the dragon, or silence it sufficiently to give the architects of the Bill and ourselves time to think and think again. *Quis ducerit?*—I am, etc.,

Penzance. G. B. RICHARDSON.

SIR,—Our partnership views with the gravest concern the Government's proposed attack on the freedom of the profession, and with it the freedom of every man, woman, and child in the country, and we wish, at the same time, to bring to the notice of our profession a few facts which we hope have not been entirely overlooked by the Negotiating Committee.

1. The devaluation of the pound is such that our incomes are worth only half pre-war. This is common to all workers, but in every other sphere wages have increased *pro rata*.

2. Income tax at its present level means that we have the use of little more than half our incomes.

3. Rates and other standing charges on our establishments are constantly rising, and will continue to do so.

4. Car replacements and repairs must in future cost at least half as much again as before the war.

5. Very many of us are fathers of children at school and college and are wondering how their education bills and other expenses are to be paid.

Many among us, and our patients also, view the scheme not as a benefit to doctor or patient but as a means to regiment every member of the community. Let us think long and fight hard before we allow ourselves to become enslaved. To those members of the profession who have only Service experience of medicine we would say, "Be on your guard." It will be too late when you realize that £400 and allowances was worth more to you in the Services than £1,300 in general practice. You have been fighting for freedom, but may well have returned to lose it.

If the profession is not well paid and satisfied the Government cannot look for a smooth-working health service, and will look in vain for the next generation of doctors as it now looks for nurses.—I am, etc.,

Wokingham, Berks. RALPH ROSE.

B.M.A. Policy on the Bill

SIR,—There is now little doubt that the executive of the B.M.A. has ample resources at its disposal to carry out any policy approved by a majority of the members of the Association. In the execution, therefore, of such a mandate it has no reason to fear frustration by doctrinaire politicians, powerful bureaucrats, Parliament, and public opinion bemused by fifty years of Socialist propaganda or men of dictator mind within our gates.

Why, then, is B.M.A. policy so ill defined ? The position is so unsatisfactory that one wonders if the B.M.A. has really any settled policy. At the moment we have seen seven guiding "Principles" (well and good), but *no Principle* to include the lot and much else which is essential. The Association is preparing for a fight in which hundreds of thousands of pounds belonging, individually or collectively, to members may be spent, and yet there is an extraordinary vagueness as to what we are about to fight for (or against). The almost perfect comment on this situation was made by Dr. Hill, at Bromley, when he said that having achieved "victory" there is a danger that we may not recognize it when we see it !

Something must be done about this before it is too late. The policy question must be clarified. This presents no great difficulty. The first essential is clear thinking. Unfortunately this is in short supply, but it should be possible to muster sufficient. There are only two policies to choose from—true democracy or dictatorship ("pseudo-democracy" is included in the dictatorships). Most doctors favour the former ; the B.M.A. executive appears to prefer an impossible compromise between the two. The National Health Service Bill now before Parliament has "dictatorship" written all over it. Medically speaking, true democracy can be summed up in some such phrase as the following: the preservation of the status of doctors as free and responsible individuals or the preservation of the freedom of doctors to act in response to the demands of their patients. It is suggested that something on these lines is the inherent policy of the B.M.A. The effective policy of the executive is something very different.

In view of the above it has been suggested that, before undertaking to make any contribution to the Emergency Guarantee Fund, many members of the Association would like a stronger assurance than has yet been given that the money so offered will be used only in the furtherance of a policy of which they approve.—I am, etc.,

Bexley, Kent. E. U. MACWILLIAM.

"Disqualification" of Doctors under the Bill

SIR,—Of all the implications of the N.H.S. Bill perhaps those of Section 42 are the most alarming. It refers to the "Disqualification of Practitioners"—i.e., the exclusion of them from participation in the service. Such exclusion may be effected by a tribunal, which *must* consider representations made to it by an Executive Council that the continued inclusion of a practitioner in the service would be "prejudicial to the service," and *may* consider similar representations made to it by "*any* other person." Thus representatives of the Government might apply for the exclusion of a practitioner on the ground that his certification was too generous, while the patient might make similar application on the ground that the same certificates were too strict. May it not be asked how a practitioner can possibly be expected to certify to the dictates of his own conscience if he is constantly under duress from two contending parties ?

Not until medical certification comes to be regarded as testimony only, and ceases to be regarded as authoritative, can the profession be freed from this perpetual assault upon its integrity. Testimony by certification is no less "testimony" than is medical evidence (often conflicting) which is given before a court of jurisdiction. The judge has the responsibility of accepting one or other of the views expressed, and this he often does with the aid of an "assessor." The fact that he may reject the view of a medical witness does not in any way reflect upon the integrity of that witness or expose the witness to penalty.

The implications of Section 42 of the Bill appear to establish a threat to the basic principles underlying the freedom of doctors to express impartially their honest opinion on medical matters. Is it too late to do anything about this ?—I am, etc.,

Wrexham. R. S. BROCK.

Suprapubic Drainage of the Bladder

SIR,—The second and third points raised by Mr. G. H. Colt (March 30, p. 501) call for comment. The use of the usual trocar and cannula through which a de Pezzer catheter is inserted may lead to the sudden emptying he describes. In the suprapubic catheter introducer around which this correspondence has centred the catheter takes the place of the cannula and is left in place when the trocar is withdrawn. The joint is quite leak-proof and there is no escape of urine.

The third point is of greater consequence. His advocacy of puncture "just above the pubis" will help to perpetuate the low suprapubic cystotomy which has so many bad consequences. If it is the first stage of a prostatectomy it leaves the field scarred for the second stage. If it is to be permanent it is in a difficult place for the fitting of a belt. Its worst effects are perhaps seen in the spinal case, where it encourages such a degree of bladder contraction as to make any reflex micturition so frequent as to be intolerable.

Whatever method we may employ for making the puncture let us at least practise and teach that it must be made well above the pubis. Incidentally, the direction of the trocar is downward and backward—not upward and backward—in order to secure what he so well terms a "sliding-shutter" action, which favours early closure.—I am, etc.,

London, W.1 E. W. RICHES.

The Incision for Appendicectomy

SIR,—Mr. Andrew Monro's interesting letter (March 23, p. 446) on the choice of incision for appendicectomy raises a number of important points. He rightly stresses the advantages of an incision placed over the appendix in difficult cases, and enumerates some of the disadvantages which may follow an indirect approach. My own experience has led me to the conclusion that although the position of the inflamed appendix can often be diagnosed with accuracy, the march of the pathological process may be quite unpredictable ; a patient with minimal symptoms and signs may have an appendix which is on the point of perforating.

The fact that the progress of the disease cannot be foreseen points the way to the safest line of treatment—operation as soon as the diagnosis is made. This course should be followed with very few exceptions. If immediate operation is to be carried out safely it is essential that the incision should allow good access to the appendix whatever its position and pathological state may be. If an abscess is present the incision must be such that an approach can be made without spreading infection, and it must be so situated that drainage can be effected safely and efficiently.

All these exacting criteria are fulfilled by the oblique muscle-cutting incision of Rutherford Morison. In case of difficulty the Rutherford Morison incision can be extended in either direction, and the complete exposure which it affords makes it possible to remove an inflamed appendix adherent to the under surface of the liver or one lying in the presacral hollow. The muscle-cutting incision is made parallel to the outer third of Poupart's ligament and the crest of the ilium and divides the internal oblique in the same line as the skin.

If the incision is made cleanly and sutured carefully, and provided that the patient is kept in bed for three weeks after operation, the frequency of hernia is no greater after this than after any other incision for appendicitis. Careful suture is essential. If the diagnosis is in doubt and the patient is a female it may be wiser to use a low right paramedian incision. In the interval removal, where difficult local conditions are not so likely to be encountered and where other causes for the attacks of pain should have been excluded by careful investigation before operation, the McBurney incision is excellent.

The appendix can be removed with little disturbance of the general peritoneum, the peritoneal scar is minimal, and the patient is able to return to a normal life with the least possible delay. In short, I fully agree with Mr. Munro that more thought should be given to the incision for appendicectomy, but my own preference is for the oblique muscle-cutting incision for nearly all acute cases, the right lower paramedian incision

where there is a reasonable possibility that the lesion may be in the female pelvic organs, and McBurney's incision for interval removals. In conclusion I may add that I was brought up very strictly on Battle's incision and am a convert to the oblique muscle cut.—I am, etc.,

British Postgraduate Medical School, W.12. R. H. FRANKLIN.

Diagnosis of Amoebiasis

SIR,—I feel that Surg. Lieut.-Cmdr. W. E. Kershaw's paper on the diagnosis of amoebiasis (March 2, p. 305), in which he draws attention to the prevalence of this condition in the Far East, comes very opportunely at a time when so many men who have served for prolonged periods in that part of the world are returning to this country, where comparatively few doctors are familiar with the disease. To suggest, as Dr. J. J. Kempton does in his letter (March 23, p. 446), that "when the incidence of amoebic dysentery exceeds 10% of the whole [i.e., all cases of dysentery] it is time to suspect diagnostic errors" may be quite correct as regards Malta, but it is simply nonsense when applied to the Eastern Provinces of India. I think most medical specialists who have served in Bengal and Assam will agree with me when I say that, in that area at any rate, the more efficient a hospital's clinical side-room the higher was the proportion of all cases of diarrhoeal disorders diagnosed as amoebic.

In one hospital in Upper Assam of which I have personal knowledge, almost 50% of all cases of diarrhoea or dysentery, both British and Indian, over a period of one year were diagnosed as being due to *Entamoeba histolytica*—and the diagnosis, in the great majority of cases, was based on the finding of *active* amoebae in the stools. I share Dr. Kempton's mistrust of the ability of most workers, unless specially trained, to recognize *E. histolytica* cysts with any certainty, but I feel he is unduly scornful of the value of sigmoidoscopy; I can assure him that I have seen typical amoebic ulceration within 6 in. (15 cm.) of the anus in a case in which daily examination of fresh stools, both before and after saline aperients, during the preceding week, had failed to demonstrate the presence of amoebae. The stool examinations in this case were all done by the same extremely competent observer who was responsible for most of the laboratory work in the particular hospital from which the figure given above concerning the incidence of amoebiasis is drawn. This hospital, incidentally, admitted all cases occurring in its neighbourhood, so that the series quoted is quite unselected and represents a fair sample of the bowel disorders occurring in this part of Assam.

The diagnosis of chronic amoebiasis may be extremely difficult even to those familiar with the diversity of symptoms which it may produce—and few textbooks lay emphasis on how very varied the picture may be. In my experience, in a patient who has been exposed to infection with *E. histolytica* (and any man who has served for any length of time in Bengal and Assam may be considered to have been so exposed, probably repeatedly), amoebiasis enters into the differential diagnosis of practically every syndrome of abdominal symptoms, and of a great many where the symptoms are mainly referable to the chest. I feel, therefore, that it would be most unfortunate if practitioners at home, who may now meet some of the more chronic manifestations of amoebiasis not infrequently, were left with the impression that it is a comparatively uncommon condition and that the majority of returned soldiers from the Far East complaining of intestinal symptoms are suffering from "bowel neurosis." That "bowel neurosis" does occur, and is, in fact, a common sequel to chronic amoebiasis and, for that matter, to any other chronic intestinal disorder, is unfortunately true, but I feel that emphasis should be placed not on this fact but rather on the necessity for very thorough investigation of all such cases presenting with vague abdominal symptoms, before they are labelled "neurosis."

The *E. histolytica* is an invader which it is not easy to dispose of, even with prolonged treatment, and many of these cases, owing to operational reasons and, in the earlier years, shortage of essential drugs, did not have adequate treatment in the first instance.—I am, etc.,

Aberdeen. NORMAN S. CLARK.

SIR,—The letter of Major J. J. Kempton (March 23, p. 445), criticizing the findings of Surg. Lieut.-Cmdr. W. E. Kershaw (March 2, p. 305) itself calls for criticism. Major Kempton suggests that such a high incidence of amoebiasis in a hospital means laboratory diagnostic errors. As a colleague of Dr. Kershaw in the hospital in question, I can state that, far from there being an error leading to too many positive laboratory findings, the opposite was, if anything, the case. So much so that the clinicians in the wards became almost impatient at the reluctance of the pathologist to diagnose amoebiasis except on the most rigid criteria and after the most exhaustive laboratory examinations.

The high incidence of proven amoebiasis among the total number of cases of bowel disorder admitted to the hospital, suspect by Major Kempton, is amply explained by Dr. Kershaw in his article as being at least partly due to the fact that the patients were selected—the cases of acute gastro-enteritis having been weeded out at other hospitals. Thus, the cases of bacillary dysentery, which Major Kempton quite rightly remarks are commoner than the amoebic ones, never reached the hospital in any numbers.

As a matter of interest, figures (both published and unpublished) given by other Service hospitals in the East show that, for cases of bowel disorder, a 46% amoebiasis rate is not in any way unusual. Kelsall and Leishman reported that amoebiasis constituted 25% of *all* admissions to a big military hospital over a period of twelve months.

Major Kempton suggests that the unfortunate "outbreak" of amoebiasis in Malta, which proved to be a false alarm, was repeated in Ceylon, and was, in fact, due to faulty laboratory diagnosis. I can only say that Dr. Kershaw personally checked all positive findings in the laboratory, and that his four years' experience in the East began with an apprenticeship in Colombo, where he studied the laboratory diagnosis of amoebiasis under local experts who have spent their lives in such work: in fact, in just that training school which Major Kempton rightly believes is essential for accurate diagnosis, and in which he himself claims to have been brought up.

In conclusion, I would like strongly to support Dr. Kershaw's appeal for the more serious consideration of amoebiasis as a cause of morbidity amongst Europeans in the East, and incidentally amongst ex-Service men in this country, and to suggest that Major Kempton's letter was, as he so tactfully thought it might be, an impertinence in its implications.—I am, etc.,

Oxford. E. M. BUZZARD.

"Congenital Malaria"

SIR,—There are many aspects of the wide subject of malaria in which faith is too often allowed to supply the deficiency of well-grounded evidence. A common example is the frequency of diagnoses of "malarial dysentery" in cases where the available facts do not warrant it. There *are* acceptable bases for the diagnosis, but they are difficult to establish and but rarely produced.

I suggest that the cases of "congenital malaria" quoted by Profs. A. Eckstein and W. C. W. Nixon (March 23, p. 432) suffer from the same paucity of evidence. It is notable that the ages of the five babies, at the onset of symptoms, varied from 8 days (Case 2) to 22 days. Case 2 had malignant tertian malaria, and thus all the cases might have been infected after birth. One has seen mosquitoes, in a heavily infested area, feeding freely on kittens while in the very act of birth, and although the hospital to which these babies were brought was in an area free from endemic malaria, one would be more convinced if assured that the babies' birthplaces were similarly free. It would have been still more convincing if evidence of the disease had been forthcoming within the first week of life.

In the absence of such evidence, it is impossible to accept with certainty the transmission of plasmodia direct from mother to baby in these cases.—I am, etc.,

Wakefield. ALAN B. RAPER.

SIR,—As a mere student of tropical medicine whose meagre knowledge is derived mainly from the literature, will you allow me to make anonymous inquiry on a few points arising from the article on "congenital malaria" by Profs. A. Eckstein and W. C. W. Nixon (March 23, p. 432).

In the five cases described and postulated positively as congenital; if the birthday may be termed "B" day, the patients first came under expert observation as follows:

Case 1 "B" + 20
" 2 "B" + 21 (history of spleen "B" + 8)
" 3 "B" + 60 (history of fever "B" + 14)
" 4 "B" + 14
" 5 "B" + 22

My interpretation of the literature suggests to me that the figures quoted, even including Case 2 with its not fully documented spleen at "B"+8, are all consistent with malaria

acquired post partum, and are irrelevant in any argument seeking to prove congenital acquisition. In further reference to Case 2, which, given a palpable spleen at "B"+8, is the most likely congenital case of the series, I would speculate that if a subnutritioned tropical adult of 100–125 lb. (45–56 kg.) can manufacture malaria in 10 days, why should not the milk-fed erythrocytes of a well-inoculated infant of 5–8 lb. (2.2–3.5 kg.) help the parasites to produce recognizable malaria in say 3 or 4 days? I would on these grounds pose: *Inquiry No. 1.*—Is there any criterion of congenital malaria which can safely be handed to the historian, other than gametocytes identified on "B" day, up to "B"+3 or 4?

In the first sentence of the commentary the authors, evidently with the intention of supporting their thesis, say "the cases described were brought to hospital in an area where malaria is not endemic." I think it would have been more pertinent if they could have said that the good mothers were brought to bed in a non-endemic area, or that the infants were protected from hostile anopheles from "B" day until their arrival at hospital. Thus: *Inquiry No. 2.*—If there was good evidence of protection why did not the authors cite it? If not, why, in the interest of scientific accuracy, did they not admit it?

The article describes a number of most interesting cases, discusses the vastness of the malaria problem, and gives valuable pointers for a campaign against the disease. But, on the main thesis, it is unfortunate that with the large amount of material available over a period of ten years to one of the authors, not a single case has been adduced of infantile malaria identified clinically or otherwise in the near vicinity of "B" day. Or is it axiomatic in congenital malaria that parasites acquired *in utero* do not proliferate until after birth? There are therefore two further inquiries I would like to make and which for convenience I will lump together. *Inquiry No. 3.*—(*a*) Reference the title of the article "Congenital Malaria," and the positive statement in the summary, "Five cases [of congenital malaria] are recorded." Are these assertions dogmatic in view of the evidence presented? (*b*) Is not the time ripe for a scientific investigation of this subject by the examination of the bloods from the newly born and the aborted foetus, and would the cephalin-cholesterol flocculation test recently brought to the fore by Makari and others be helpful in this respect?—I am, etc.,

"STUDENT NO. 2."

Phrynodermia and Vitamin A Deficiency

SIR,—Dr. H. E. Magee in his article (March 30, p. 475) quotes Stannus, in reference to phrynodermia or follicular hyperkeratosis, as being of the opinion that this condition is not nutritional in origin and not pathognomonic of vitamin A deficiency.

During the period 1942–5, while a prisoner of war in Singapore, and in charge of a large skin department, I saw many cases of phrynodermia, usually on routine examination where the patient had appeared for some other dermatosis. Although the condition occurred in the apparently well nourished it very greatly preponderated in the obviously undernourished, especially in those returning from "up country" to Singapore. The sites of election were the knees, elbows, and great trochanters; and whilst mild cases had the appearance of a simple follicular keratosis (frequently being much more obvious in early cases by a roughness on palpation than by a cursory inspection), more advanced cases felt and looked (apart from the colour) like the toad skin implied in the name phrynodermia.

The very great majority (no figures available) responded with dramatic and rapid improvement, usually clearing up in about two weeks, on red palm oil (which has a high vitamin A content), taking 1 to 2 oz. (28 to 56 ml.) daily.

Although, of course, the fat *per se* helped greatly in the nutritional amelioration of the patient, the smallness of the total amount—i.e., about 1 to 2 lb. (450 to 900 g.)—in two weeks makes it very unlikely that fatty acids are a factor. On the other hand, the celerity of the therapeutic response is much more indicative of the condition being a vitamin A deficiency, this response being comparable to the effect of thiamine in wet beriberi and to that of the B_2 complex in the uncomplicated cutaneous manifestations in pellagra.

Night blindness was not a common symptom. Some of the cases did not respond to red palm oil. The percentage (no figures available) was very low, and I should guess at certainly less than 10%. These cases were regarded as *not* being due to vitamin A deficiency and were labelled lichen pilaris; about one-half of these cases stated that they had had the condition *before* becoming prisoners of war.

Conclusion.—That although phrynodermia or follicular keratosis is not absolutely diagnostic of vitamin A deficiency, it is so in the great majority of cases, or at any rate it was so in the cases that I saw.—I am, etc.,

L. SEFTON,
Capt., R.A.M.C.

London, N.W.2.

Sulphaguanidine and Sprue

SIR,—It is interesting to speculate on whether sulphaguanidine treatment of dysentery, by suppressing the synthesis of the B group of vitamins in the gut, has increased the incidence of sprue. I note that the majority of cases of sprue returning to this country have had one or more courses of sulphaguanidine. Keele and Bound (Jan. 19, p. 77) state that the incidence of dysentery preceding sprue is not significantly higher than in control cases. I wonder if any of my colleagues in India can tell me whether the incidence of sulphaguanidine therapy preceding sprue is higher than in control cases. This ought to give valuable evidence of the part played by vitamins of the B group in the aetiology of this disease, and warn us to be cautious in using sulphonamides in cases and localities where vitamin deficiencies are likely to occur.—I am, etc.,

J. D. WHITESIDE,
Squad. Ldr., R.A.F. Medical Service.

Hereford.

The Problems of Diphtheria

SIR,—May I thank Dr. Alex. Joe (March 23, p. 445) for correcting my unintentional misquotation, and may I offer Dr. H. S. Banks a sincere apology for my carelessness in causing him apparently to misrepresent the views of the late C. B. Ker on the dosage of diphtheria antitoxin.

In my survey of the results of diphtheria prophylaxis in Gateshead I followed a convention in referring to certain patients as "fully inoculated," thereby implying that posterior Schick tests had not been performed. The omission of the Schick test is criticized by Dr. H. Lyndhurst Duke (p. 445), who would seem to claim for the Schick-negative reactor only a relative immunity, inasmuch as he admits that a negative test does not preclude an attack of diphtheria. By the context, however, Dr. Duke submits that full prophylaxis resulting in a Schick-negative condition guarantees an immeasurably higher degree of immunity than can be claimed for the same inoculations without a posterior Schick test—a view with which I cannot agree. Although the fully inoculated children of Gateshead are not tested, we do maintain the adult staffs of municipal hospitals and nurseries in the Schick-negative state, and among these we have had 23 cases of diphtheria, clinically indistinguishable from "fully inoculated" patients and much too numerous to justify his assumption. Indeed, we are now inoculating the Schick-negative entrant student nurses of our isolation hospital with three injections of T.A.F.

Even the claim that a Schick-negative reactor will not die from diphtheria, if he ever gets it, cannot be upheld, for Williams and Carling (*Public Health*, 1938, **51**, 338) record a death from diphtheria in a child rendered Schick-negative by a single large dose of A.P.T., and I find in an official analysis of 17 diphtheria deaths in inoculated persons in the first half of 1943 one other fatality in a patient rendered Schick-negative four years before by three doses of T.A.F.

My abridged table, which Dr. Duke criticizes, was intended to bring out in figures the clinical evidence of the relative immunity which I claim for the "fully inoculated," by opposing the severity and mortality of the natural disease in Gateshead to the attenuation of toxic symptoms and sequelae, the considerable reduction in the proportion of severe nasopharyngeal and mixed forms of the disease, and even the mitigation of the last—all as a result of the full inoculation course. Here I may comment that the only valid test of the worth of prophylactic measures against diphtheria is the result in areas where the infection is endemic.

In spite of certain pitfalls, including false negative results, which can be avoided only by the co-operation of the subjects

coupled with the injection of toxins of assured potency by experienced observers having the necessary time, the Schick test can be a valuable indicator of the existence of blood antitoxin where there was formerly none. What it cannot do is to vouch for the permanence of blood antitoxin or tell us the ability of the individual to withstand infection. The test therefore finds its true place in surveys of the inoculated as a check of the potency of the antigen. After such a survey, Fulton and his colleagues (*British Medical Journal*, 1942, **1**, 352) have assured us of Schick conversion rates of 97 to 100% with doses of 0.1 ml. and 0.3 ml. of A.P.T. of reputable manufacture and so suggest a posterior Schick test only for small samples of the inoculated.

In this area difficulties of staffing and pressure of other work limit us to the inoculation of children, and I know that in many other areas the position is similar. I, for one, would be content if I could get all the children, including those now partly inoculated, to complete the full course of injections.—I am, etc.,

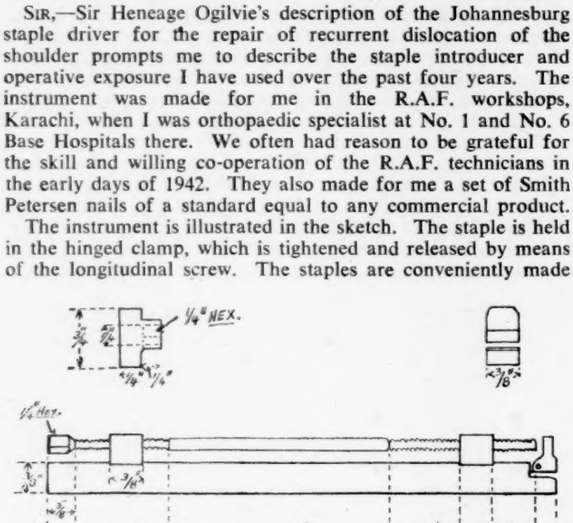
JAMES GRANT,
Medical Officer of Health.

Gateshead.

Staple Introducer for Recurrent Shoulder Dislocation

SIR,—Sir Heneage Ogilvie's description of the Johannesburg staple driver for the repair of recurrent dislocation of the shoulder prompts me to describe the staple introducer and operative exposure I have used over the past four years. The instrument was made for me in the R.A.F. workshops, Karachi, when I was orthopaedic specialist at No. 1 and No. 6 Base Hospitals there. We often had reason to be grateful for the skill and willing co-operation of the R.A.F. technicians in the early days of 1942. They also made for me a set of Smith Petersen nails of a standard equal to any commercial product.

The instrument is illustrated in the sketch. The staple is held in the hinged clamp, which is tightened and released by means of the longitudinal screw. The staples are conveniently made



from an ordinary stainless-steel table knife, which provides steel of the proper temper. For the exposure of the labrum and the neck of the scapula I have found it unnecessary to divide the coracoid. The exposure is through the delto-pectoral sulcus. The short head of biceps and coraco-brachialis are retracted medially to expose the subscapularis and the capsule, which are divided in the direction of the fibres of the former and not transversely. This gives adequate exposure even in the most muscular individual if attention is paid to perfect haemostasis. One transverse suture of catgut through subscapularis and capsule repairs these structures after the staple has been driven home.—I am, etc.,

J. S. MAXWELL.

Hairmyres Hospital, East Kilbride.

Prevention of Burns in Children

SIR,—A recent case in the coroner's court refreshed my memory concerning the law with regard to the protection of open fireplaces in private houses where there are children under 7 years of age. I do not know whether this law applies to open electric fires. With few exceptions manufacturers of these fires do not seem to give much thought to this matter. It would appear to me that the most suitable protective guard for such a fire should be included in the structure. A protective mesh is useless unless it is at such a distance from the element that a child's fingers can be prevented from touching it. I would suggest that the element be protected by a guard which is convex forward and the element placed at a safe distance from it.

I have in the last few months encountered five cases in children where either one or both hands have been crippled as a result of handling the hot element of an electric fire. The ages of the children have ranged from 1½ years to 8 years of age. Perhaps from a legislative point of view the Board of Trade could insist on such a guard being included in the specifications of all open electric fires and gas stoves.—I am, etc.,

EMLYN LEWIS.

Gloucester City General Hospital.

Deafness from Rubella in Pregnancy

SIR,—In the *Journal* of June 16, 1945 (p. 845), you published figures which I had collected on the subject of rubella during pregnancy causing deafness in the child. In view of the interest which is being taken in this matter, I give you my figures as they now stand.

Deaf children born in 1940–1: Boys 64, girls 38; total 102.
History of rubella during first 4 months of pregnancy: Boys 16, girls 20; total 36.

Some of these children have defects of the eyes and some have defects of eyes and heart. I have the birth weight of 19: fifteen between 5 and 6½ lb. (2.2 and 2.9 kg.); two 7½ lb. (3.4 kg.); one 4½ lb. (2.0 kg.); one 3½ lb. (1.5 kg.). In a few cases the intelligence has been questioned, but most of those with whom I am dealing at the moment show average, and even above average, intelligence. There are a further 6 cases in which, from the symptoms given, I suspect rubella, but it was not diagnosed.

Of the total of 102 children, 40 are left-handed or ambidextrous, 16 of these having left-handedness in the family; and 15 are right-handed but have left-handedness in the family.

Deafness is accounted for in 15 cases by meningitis and in 8 by heredity. In the remaining 43 cases in which deafness was not due to rubella in pregnancy there was the following disease history during the first three years of life: measles, 15; whooping-cough, 10; pneumonia, 9; bronchitis, 8; in one case the mother had mumps during pregnancy. In 5 cases instruments were used at birth.—I am, etc.,

SYLVIAN M. MARTIN.

London, S.E.4.

"Cord Round the Neck"

SIR,—With regard to the controversy whether this condition can cause stillbirth, a case which I had a few years ago may be of interest.

The woman was about 28 years of age, and the whole antenatal period was quite normal. At the confinement the foetal heart was heard beating normally, and the presentation was a vertex. The descent proceeded uneventfully until the head was well down on the perineum, and then no further progress took place, although the uterine contractions were strong and regular at about three-minute intervals. As soon as the head touched the perineum the usual routine examination had been made for cord round the neck, when it was found that there were at least two loops of the cord in this position, but under such extreme tension that it was quite impossible to pull a loop over the head to relieve it.

As it seemed from previous examinations of the patient that the only cause of obstruction must be the cord, and as no further descent was taking place, there seemed no other course but to sever the cord and deliver as quickly as possible. This was done, and the baby delivered (without instruments) very soon afterwards. The cord was found to be abnormally long, being wound twice round the body and four times round the neck, making a total length of approximately 6 ft. (1.83 m.) from placenta to foetus. The child was not breathing, and I could not detect any pulsations in the foetal end of the cord. The usual methods of revival were tried, but unfortunately with no effect.

I decided at the time (and I have not yet had reason to alter my opinion) that death occurred shortly before delivery due to the abnormal position of the cord, which caused either

obstruction of the foetal circulation to the placenta or, by pressure on the neck, interference with the circulation to the brain, or possibly both conditions.—I am, etc.,

Slough. H. TUDOR EDMUNDS.

Nomenclature of Ekbom's Syndrome, or the Fidgets

SIR,—The condition described by Ekbom (*Acta med. scand.*, 1944, **118**, 197; 1945, *Suppl.*, 158, and your annotation of Jan. 19, p. 95) has been recognized by the laity since the 16th century at least. The *New English Dictionary* has:

"Fidge, v. *Obs.* (1) To move about restlessly or uneasily. . . . 1577 Breton. . . . Some [dame] would fidge, as though she had the itch. . . ."

"Fidget, sb. (1) A condition of vague physical uneasiness, seeking relief in irregular bodily movements. App. first used in *the fidget(s)* (now always pl.) as if the name of a malady or pathological symptom (sometimes in definite pathological sense: see quotation 1876) . . . 1876 Bartholow *Mat. Med.* Wakefulness from . . . unrest of the peripheral nerves (fidgets), and similar causes, will generally be relieved by the bromides."

This previous notice does not detract from Ekbom's merit, as he is the first to describe the condition in medical literature and to recognize its clinical importance. I suggest that minor degrees occur normally in many if not in all people. It is not uncommon to see a person sitting at rest, perhaps reading, who frequently changes the position of his legs, crossing and uncrossing them, without being conscious of the movements. Here the afferent stimuli never become sensations but cause the movements from a lower nervous level. At a further stage the stimuli enter consciousness but are not troublesome, and finally they may reach a clinical intensity of disturbance.

You follow Allison in using the word jitters. This word is not given in the *New English Dictionary*, but in Wyld's *Universal English Dictionary*, 1936, Appendix: "Jitters, n. pl. American slang, the creeps, nervous fluster, trepidation." There are two objections to this word: (1) Some degree of panic fear is connoted by it, and this is a matter of diagnostic importance since panic fear distinguishes Freudian psychoneurosis from the fidgets. Fear of fidgets is merely a justifiable dread of a disturbed night. (2) Although I have the greatest admiration for the vividness of American usage I feel bound by the advice of H. W. and F. G. Fowler that American usage should not be employed by English writers.—I am, etc.,

Sheringham, Norfolk. F. H. STEWART.

Diuresis by Suggestion

SIR,—I have frequently observed this phenomenon but have never seen it described, so it may be worth recording. When the ureters have been catheterized I ask my house-surgeon, or someone else present in the theatre, to count the number of drops from the catheter over a period of, say, 30 or 60 seconds. The patient is then asked if he would like a glass of beer, or perhaps a cup of tea. In the majority of cases there is a material increase in the rate of flow within 10 seconds, whereas the selected drink does not materialize for at least 10 minutes. Does the renal epithelium flush with pleasure at the prospect of an appropriate stimulant?—I am, etc.,

New Milton, Hants. A. BASIL ROOKE.

"Deck Ankles" and "Travellers' Oedema"

SIR,—The following experience may be of interest as illustrating a phenomenon possibly related to "deck ankles."

In July, 1945, I was a prisoner on a train when the Japanese transferred a mixed party of prisoners of war and civilian political prisoners from Haiphong Road Camp, Shanghai, to Fengtai Camp, near Peiping. We left Shanghai in the evening of July 8, and next morning about a dozen men showed me oedematous feet and ankles. By the morning of July 12 out of 314 prisoners 24 of us were suffering from this condition, ranging from slight oedema to gross oedema with inflammation. On the evening of July 12, after a short forced march, we were able to lie down on a brick floor, and next morning the majority of us were somewhat better. The last cases cleared up five days later. After our release in Peiping we were taken by train on Oct. 5 to Tangku, near Tientsin, in comfortable first-class coaches, the journey taking only about six hours, but in the course of this short journey oedema recurred in several of the former patients. Col. W. S. Flowers, of the British Red Cross, Shanghai, subsequently informed me that there had been further recurrences in ex-prisoners travelling home by air from China. On Feb. 2 I left Shanghai in the repatriation ship *Highland Chieftain* among some 1,200 passengers, the majority of whom were ex-internees or political prisoners; the S.M.O., Capt. Seville, R.A.M.C., drew my attention to the incidence of "deck ankles."

It was, of course, impossible to carry out any biochemical tests under the conditions of a Japanese prison camp, but I think the following factors are worthy of consideration:

(1) We left Shanghai with an atmospheric temperature of 90° to 100° degrees in the shade, and a humidity of about 100°. A large number of the men had been working hard for two or three days loading the train, and the water supply during the four days on the train was inadequate. No salt was supplied on the journey.

(2) There was a chronic insufficiency of vitamin B in the camp diet. There had been 6 cases of frank beriberi and many minor manifestations of vitamin B deficiency before the camp was moved.

(3) Men were sitting in cramped positions for four days and were only allowed to leave their seats to go to the lavatories, and for short walks on two of the stations. On the other hand, I had one of the worst pairs of inflamed feet myself, although I was allowed to walk up and down the train to attend my fellow prisoners.

(4) Our diet had been deficient in proteins, especially animal proteins.—I am, etc.,

London, S.W.16. STEPHEN D. STURTON.

Islam and Medicine

SIR,—In your note on the influence of Islam on medicine ("Nova et Vetera," March 16, p. 401) the statement that "for the next 500 years the Muslims alone . . . played a vital part in the evolution of humanity. They resuscitated Greek medicine by translating Galen's *Anatomy*" requires some modification, especially as it is immediately followed by a reference to Hunayn ibn Ishaq. Hunayn, more generally known as Johannitius, was a Christian, and, as Prof. E. Browne shows in his Fitzpatrick lectures, the earliest translators and transmitters of Greek medicine were Christians expelled from Byzantium as Nestorian schismatics. The great medical school of Jundi Shápur was largely the result of this expulsion.

Splendid as were the contributions by Arabs and Persians, both Christians and Jews played a most important role. In fact Campbell writes, "Although we have called this space of time the 'Arabic Period' it can with justice be called the 'Jewish Period,' as the Jews were closely identified with the medical culture of Islam in general." Hunayn translated much of the Hippocratic writings and Galen primarily into Syriac and thence into Arabic, and it was through Hebrew translations that Arabic literature was brought into Europe, though the great period of Jewish translators was somewhat later, between the eleventh and thirteenth centuries. The whole question is fully surveyed by Friedenwald in his recent volumes *The Jews and Medicine* (Johns Hopkins Press, 1943).—I am, etc.,

G. A. AUDEN.

Physical Therapy in Mental Disorder

SIR,—Dr. Harvey Baird (March 23, p. 447) has raised an interesting point in his pertinent question regarding the accuracy of the diagnosis of schizophrenia. I have, however, always been under the impression that it was Watson (of Rainhill) and not Shaw Bolton who originated the theory of the deficiency of the supragranular layer in dementia praecox. Shaw Bolton may have been, and, in fact, probably was, the first to publish these histopathological findings, but I believe it was Watson's theory which he took with him from Rainhill to Wakefield. He had free access to Watson's records and histological specimens. I am, of course, open to correction, but I like honour to be given where it is due. This I do know—that Watson firmly believed that dementia praecox was the result of an innate anatomical deficiency, and he had a great deal of substantial evidence to prove his claim.—I am, etc.,

Keighley. WRIGHT LAMBERT.

Obituary

Dr. RHODES HAYGARTH died suddenly on Feb. 27. Born at Keighley, Yorks, in 1870, his early education was at Keighley Trade and Grammar School and he graduated M.B., C.M. at Edinburgh with first-class honours in 1895. He settled at Cross Gates, Leeds, in 1898 and practised there until his retirement in 1934. For several years he was medical officer of health for the district of Garforth. He served as lecturer and examiner to the St. John Ambulance Association for many years. During the first world war he had charge of a V.A.D. hospital and superintended a number of wards at the Killingbeck Hospital, in addition to organizing the medical services for a local Government factory. Dr. Haygarth died at Grange-over-Sands, Lancs, where he had lived since his retirement. He was a man of great kindliness of heart, and was much beloved by his many patients and by all who knew him. He leaves a widow and one son.

With the death of Dr. GILBERT E. MOULD on March 16 there passed away one who, for many years, had been a familiar figure in the medical and sporting circles of Sheffield and the districts around. A son of the late Dr. Mould, superintendent of Cheadle Royal and the leading authority on mental diseases in Manchester and the North-West of England, he devoted his life to this specialty. From Cambridge he completed his medical studies at St. Mary's Hospital in 1894. After holding resident posts there, he worked as assistant medical officer at various mental institutions, until he became head of The Grange, near Rotherham, where he remained to the end of his life. For several years he was physician for mental diseases to the Sheffield Royal Hospital, and later to the Rotherham Municipal Hospital. For his ripe experience and sound knowledge of mental diseases he was highly valued by the profession of the district. A keen sportsman, he was well known in the hunting-field, and his holidays were always spent fishing in Scotland. A kindly, sociable man, he had a wide circle of friends, by whom his loss will be deeply felt. Dr. Gilbert Mould joined the B.M.A. in 1897 and had been chairman of the Rotherham Division, which he represented at two Annual Meetings.

Dr. BENJAMIN RIGBY JOHNSTON, who died on March 17, was educated at Rossall School and in Dublin and Brussels, obtaining the L.R.C.P.I. and L.M. in 1884, also the M.R.C.S.Eng. and the M.D.Brussels in 1890. After various resident appointments in Dublin hospitals he became ship surgeon in 1886 to the Far East; he then acted as assistant at Birkenhead for a year or two, and in 1888 settled at Grasmere, where he practised continuously for about 58 years, dying in harness at the age of 84. He was buried in Grasmere Cemetery after a service at St. Oswald's Church. In spite of one of the wettest days of the year the church was packed for a very beautiful service conducted by the present rector, and a previous rector, the Rev. J. B. Phillips, travelled up from Northampton to give an impressive funeral oration. Dr. Benjamin Johnston had numerous interests, especially literary and archaeological, being secretary to Dove Cottage and the Wordsworth Museum; also he helped, and identified himself with, every good activity in the village. His brother, Dr. G. Ainslie Johnston, and all the members of the family have been greatly comforted by the receipt of a very large number of letters, the great majority of which contain the words: "Dr. Ben was the most useful man in Grasmere for 58 years." So ends a life well spent.

We regret to announce the death on March 18 of ARTHUR MORRELL JOHNSON of Bury, Lancs, chairman of the Bury Division of the B.M.A. in 1924–5 and its representative at seven Annual Meetings of the Association. He was born in 1887 in Nova Scotia and was educated at Dalhousie University, graduating M.D., C.M. in 1911. After the 1914–18 war, in which he served in Gallipoli, Egypt and France, and won the Military Cross, he went into partnership with his uncle, the late Dr. I. W. Johnson, at Bury. He was appointed honorary assistant surgeon to the Bury Infirmary in 1920, was promoted full surgeon two years later, and became consulting surgeon in 1935 and was for many years chairman of the medical board. He maintained his interest in military administration and held the rank of colonel, A.M.S.T.A., receiving the Territorial Decoration in 1930 and the C.B.E. in 1939. Col. Johnson again went on active service in 1940 and was in the retreat from Dunkirk. After spending many hours on the beaches he was taken on board a ship and collapsed from exhaustion; on his recovery he went to Egypt to take charge of the 6th General Hospital, returning home to resume his civilian practice in 1942. He was one of the oldest serving members of the Bury Insurance Committee, of which he had been chairman. He joined the B.M.A. in 1917 and served at headquarters on the Protection of Practices Committee and the Naval and Military Committee.

Mr. EDWARD HARRISON, consulting surgeon to the Royal Infirmary, Hull, and at one time the leading surgeon in that city, died at Paignton, Devon, on March 18, aged 88. Educated at Cambridge and St. George's Hospital, he gained first-class honours in physiology in the Natural Sciences Tripos of 1878, and graduated M.B. in 1883 and M.D. in 1898. He had been a foundation scholar and prizeman of Clare College and was for several years examiner in anatomy for Caius and Clare Colleges. After taking the F.R.C.S. in 1886 he was elected to the honorary staff of the Hull Royal Infirmary, and was president of the East Yorkshire and North Lincs Branch of the B.M.A. in 1898. He was an honorary life member of the St. John Ambulance Association and consulting surgeon to the military hospital at Hornsea. A man of wide cultural interests, Mr. Harrison had been president of the Hull Astronomical Society and of the Literary and Philosophical Society; he also took a great interest in the Hull Philharmonic Society and was deputy organist at Holy Trinity Church.

Dr. FRANCIS JAMES COUTTS, of Leytonstone, who died on March 18, aged 79, at the Connaught Hospital, Walthamstow, where he had been honorary surgeon for 32 years, qualified in 1895 from University College Hospital. He took the M.D.Lond. degree in 1897, and the F.R.C.S.Ed. diploma in 1913. At U.C.H. he served as house-surgeon and house-physician. For half a century he was an honoured figure in the local medical profession, and there can be few families in the borough of Leyton who have not directly or indirectly benefited from his skill and kindness. He remained very active for his years, and when in 1940 he was bombed out of his house he moved across the road and continued work right up to the day he was taken ill. He retired from his hospital duties last Christmas and at that time was chairman of the medical committee. Recently he received a silver salver inscribed with all the names of the hospital's medical staff. His sudden death soon afterwards came as a shock to the Leyton and Leytonstone public, and he will be greatly missed. His widow, Dr. Jane S. Coutts, retired from practice a considerable time ago; she was an anaesthetist at the Walthamstow Hospital during the war of 1914–18.

The late Dr. VALENTINE CHARLES ROBINSON was educated at Cambridge and St. Bartholomew's Hospital. He gained first-class honours in the Natural Sciences Tripos of 1923, qualified in 1929, and took the M.B., B.Ch. in 1937 and the M.R.C.P. in 1940. Before joining the staff of the Central Middlesex County Hospital he had been clinical assistant at the St. John Clinic, Pimlico, and chief assistant in the electrical department at Bart's. During the war he was a physician in the E.M.S. A colleague writes: The death of this unique and lovable person has been a grievous blow to everyone at the hospital. Doctors, nurses, ward maids, and his patients all found his combination of charm, sympathy, and humour something quite out of the ordinary. Though burdened by a succession of illnesses he managed to succeed in an astonishing number of interests. He was a fine clinician, infinitely patient and thorough in both history and examination, and his accurate and neat notes are well known. He was deeply interested in all his patients apart from their illnesses, realizing better than most of us the importance of their homes and habits; his kindness and patience made them hold a deep affection for him. His general knowledge was prodigious and there seemed no subject on which he was not well informed. This wide scholarship made him a versatile conversationalist, and his friends will treasure the long and interesting talks they had with "Robbie." He was the perfect companion, for he could listen with understanding and patience to people who knew much less than he did, and he made them feel more intelligent by drawing out the little learning they had. He was a skilful writer with a gift for expressing himself clearly even on the most abstract or controversial subjects. So original and stimulating were his letters that they were often kept and passed round among his friends. He was a very capable musician and got much pleasure from playing in amateur orchestras and quartets. He had a quick wit and his gaiety and sparkle were the more striking because of the contrast they made with his face, which was serious and almost melancholy. His lively mind was not satisfied by any ready-made set of ideas or by doctrines backed up by tradition instead of reason. His sincerity and honesty were such that he could discuss unorthodox religious ideas with the most rigid believer without giving offence, and he never ceased the vain search for a creed that would satisfy both his rationalism and his idealism. He will be profoundly missed by everyone who knew him, and his close friends find his death leaves an emptiness which nothing can fill.

Medical Notes in Parliament

Health Service Bill: Motion for Rejection

In the names of Mr. Churchill, Mr. Eden, Mr. Richard Law, Mr. Willink, Mr. Butler, and Earl Winterton the Conservative Party in the House of Commons tabled on April 8 a motion for the rejection of the National Health Service Bill. It runs: "That this House, while wishing to establish a comprehensive health service, declines to give a second reading to a Bill which prejudices the patient's right to an independent family doctor; which retards the development of the hospital services by destroying local ownership and gravely menaces all charitable foundations by diverting to purposes other than those intended by the donors the trust funds of the voluntary hospitals; and which weakens the responsibility of local authorities without planning the health services as a whole."

"Consultation" on the Bill

Mr. DE LA BÈRE on April 4 asked whether the Prime Minister, in view of the secrecy imposed on the British Hospitals Association during their recent discussions with the Minister of Health and the misunderstandings which such secrecy engendered, would give an assurance that the Government would discontinue this practice in connexion with the introduction of further measures of legislation. Replying for Mr. Attlee Mr. HERBERT MORRISON said that in the case mentioned the Minister of Health was not consulting the British Hospitals Association as such or expecting it to commit itself to any specific proposals. He was consulting a group of individual representatives from the association in order to obtain their personal expert opinion on certain points before the Government's proposals were submitted in the proper manner to Parliament. Such a consultation was naturally confidential, and Mr. Morrison saw nothing to be deprecated in it.

Mr. DE LA BÈRE asked whether Mr. Morrison appreciated how regrettable it was that these enlightened representatives were both gagged and muzzled. He asserted that the Government always sought to move the Closure, both in Parliament and with the general public, on all matters of truth. Mr. MORRISON said that seemed to be rather a mouthful of irrelevancies. These confidential discussions were started by Mr. Willink, the previous Conservative Minister of Health. If Parliament was never to permit confidential discussions prior to the introduction of a Bill, the alternative was to bang the Bill down on the Table and say to all those interested, "There you are, take it or leave it." He thought it far better to consult people.

Mr. OLIVER STANLEY: Was not this the procedure which the Minister of Health adopted in this House, and did he not, in fact, gag them by asking them to come and see him, and then paying no attention to them?

Mr. MORRISON: If consultation proceeds on broad policy prior to the introduction of a Bill, it must be confidential. The right hon. gentleman may call it gagging if he likes—that is just Conservative language—but they must be confidential. That is what it amounts to. I am perfectly sure that the right hon. gentleman, in the course of his Ministerial life, has had heaps of consultations of precisely the same type.

Demobilized Doctors and the Health Service

Mr. SOMERVILLE HASTINGS inquired on April 4 whether the Minister of Health had any statement to make regarding the employment of demobilized doctors before the National Health Service Bill came into operation. Mr. BEVAN said he would be glad to consider whether there was any statement he could make which was likely to be of assistance to doctors leaving the Forces, but it would be appropriate that any announcement should follow and not precede discussion of the principles of the National Health Service Bill by the House.

Control of Nurses

Replying on April 4 to Mr. Haydn Davies, Mr. BEVAN said that, as was announced on Dec. 13, general controls on the movement of nurses and midwives would cease to operate on June 20. It had accordingly been decided that the Mental Nurses (Employment and Offences) Orders should be revoked and cease to operate on that date. Revocation of these Orders might cause temporary difficulties in retaining staffs in some institutions, but if the Orders were not revoked the mental nursing service would, after June 20, be the only branch of nursing subject to restrictions of that kind. That would be a grave handicap to future recruitment to the service. After full consideration the Government concluded that the balance of advantage lay in withdrawing the Orders on June 20.

A similar announcement was made in the House of Lords.

Release of Doctors

Mr. BEVAN announced on April 4 that the number of doctors released from the armed Forces since VE Day was: Navy, 1,411; R.A.F., 1,054 (in both cases to March 15); Army, 5,907 (to March 25). The numbers serving at those dates were, respectively, 1,229, 1,602, and 6,371.

Medical Care in Rural Areas

On April 4 Lieut.-Col. HARE asked Mr. Bevan to ensure that every village without a resident doctor should have a visiting doctor who would hold a surgery once a week. Mr. BEVAN said a special fund was available from which assistance could be given to insurance doctors practising in isolated rural areas for such objects. He had, however, no power of direction in this matter, nor would it in any event be practicable to make such arrangements covering every village.

Smallpox on Incoming Ships

Mr. BEVAN stated on April 2 that the number of cases of smallpox landed in this country from the ships mentioned below and the reported vaccination history of each were as follows:

Empress of Australia.—1 case. Vaccinated in infancy, and several times while in the Merchant Navy, but with no take.

Duchess of Richmond.—4 cases. Vaccination: (*a*) infancy; 1940, slight take; July, 1945, no take; (*b*) infancy; May, 1941, September, 1941, and September, 1944, no take; (*c*) infancy; July, 1945, no take; (*d*) March, 1942; April, 1943; August, 1945.

Georgic.—No case.

Batory.—1 very doubtful case. Vaccinated in infancy and frequently during service, lastly in 1945.

Orontes.—1 case Vaccinated in infancy and in January, 1946.

Service personnel from the *Duchess of Richmond* were retained under medical supervision from arrival on March 1 to March 7; and from the *Georgic* from arrival on March 2 to March 4, when it was decided that a suspected case was not a case of smallpox. Three contact cases from the *Empress of Australia* were taken to hospital.

Hospital Beds

Mr. BEVAN stated on March 28 that the number of patients in Service hospitals in Great Britain was approximately 21,300 and the number of trained nurses 1,936. The figures for civil hospitals (not including mental, mental deficiency, and maternity hospitals and institutions) were approximately 282,100 patients and 30,900 trained nurses. The number of beds reserved in civilian hospitals and institutions in England and Wales for the Emergency Hospital Scheme was approximately 53,000. No part of this total reservation was set aside exclusively for military patients, but the latest available figures showed that of these beds 15,800 were occupied by Service patients and 10,700 by civilian patients who were the responsibility of the scheme, leaving approximately 26,500 vacant emergency scheme beds, the majority of which were unstaffed. The bed reservation figures for the Emergency Hospital Scheme were under constant review. If hospital authorities found it necessary to encroach upon the emergency reservation they were at liberty to do so in agreement with the responsible medical officers of the Ministry of Health. It was hoped to release a substantial number of beds after June 1, when it was expected that the Army's needs for civilian hospital services would be limited to exceptional cases which could not be provided for in military hospitals.

Nursing Vacancies

On March 28 Mr. BEVAN said that there were approximately 28,000 vacancies notified to the Ministry of Labour and National Service on March 11 for nurses of all grades in hospitals and similar institutions in Great Britain. During the six-month period ending Feb. 28 3,239 trained nurses were released from the Forces. The number still in the Services was 8,973.

Road Accidents

Mr. STRAUSS, replying on March 25 to a debate on road accidents, said the Ministry of Transport had been anxious to reintroduce driving tests as soon as possible, but in his view their usefulness could be exaggerated. Few accidents took place as the result of action by motorists who had been only six months on the road. Most of the accidents took place through motorists who had been driving for a long time. He hoped

that driving tests could be introduced in the autumn. No decision had been made on the classes of persons to whom they should be applied.

Doctors in Austria.—Replying on March 21 to Col. Stoddart-Scott, Mr. J. B. HYND stated that all posts in the medical faculty of Vienna University were filled except two. The University authorities were at liberty to offer these posts to Austrian doctors in the United Kingdom, but there was no general shortage of doctors in Austria.

Disabilities in Deaf Children.—Asked on March 28 how many deaf children were suffering from epilepsy, marked mental retardation, blindness, and impaired vision, Miss ELLEN WILKINSON said she had no information of the total number of these children in England and Wales. In one special school for the deaf which catered for such children there were 48 who were educationally retarded, 6 who were blind, and 5 who were partially sighted, and a few such children were in attendance at other schools for the blind and the deaf. It was hoped to provide for a group of these children in due course in another school for the deaf. With this additional provision the needs of the whole country would be met.

Notes in Brief

Accounts of income and expenditure of the General Medical Council and of the Branch Councils and apportionments of the amounts payable to the General Council by the Branch Councils for 1945 were presented to Parliament on March 26.

Sir Ben Smith said on March 27 that there was no prospect of his bringing soap rationing to an end at an early date, nor of his providing extra supplies.

Deafness of any type or category due to war service is accepted for pension purposes. The question of a revision of categories does not therefore arise. Approximately 15,500 compensation awards have been made to persons suffering from disablement due to aural disease or deafness arising out of the war.

Mr. Isaacs has decided to establish a number of rehabilitation centres on the lines of the Egham one in various parts of the country.

A statistical inquiry has been finished into the system of priority permits for milk. Sir Ben Smith is seeking the advice of his medical advisers on certain aspects, but Dr. Summerskill says there does not appear to be serious or widespread abuse of the issue of permits.

Universities and Colleges

UNIVERSITY OF LONDON

The following members of the medical profession have been elected Fellows of University College, London:

Arthur John Gardham, M.S., F.R.C.S., surgeon, University College Hospital; John Collis Hawksley, M.D., F.R.C.P., physician, University College Hospital; Mrs. Elfrida Lilian Gwendolen Hilton (*née* Hill), M.B., B.S., D.M.R.E., F.F.R., radiotherapist, University College Hospital; and Robin Sturtevant Pilcher, M.S., F.R.C.S., professor of surgery, University College Hospital.

UNIVERSITY OF LEEDS

The following candidates have been approved at the examinations indicated:

M.D.—C. E. Astley, H. S. Capoore, J. H. Fodden, E. Leigh, M. M. Nagley, D. Taverner (with distinction), W. Whitaker.

FINAL M.B., CH.B.—Helen Samson (with second-class honours), C. T. H. Barrett, E. H. Batt, Yvonne Dales, N. Goldberg, H. Hanson, Enid M. Jesse, Joan N. Leedham, A. Levy, N. Mellor, Doreen E. Newland, N. H. Silverton, Sara I. Stinson, Elizabeth M. Stokes.

The following scholarships and prizes have been awarded: *Littlewood Prize*, Audrey Gillott, R. E. Rossall. *Infirmary Scholarship*, R. E. Rossall. *Birkett Prize*, Audrey Gillott. *Waddington Prize*, Margaret J. Barker. *Hardwick Prize* and *West Riding Panel Practitioners' Prize*, Henriette Lackner. *McGill Prize*, Yvonne Dales. *Scattergood Prize*, Mary M. Matheson.

UNIVERSITY OF WALES

The following candidates for the degrees of M.B., B.Ch. at the Welsh National School of Medicine have satisfied the examiners at the examinations indicated:

HYGIENE.—Margaret E. Davies, Clare G. M. Dillon, S. T. James, M. G. Jones, N. E. T. Jones, K. P. Williams.

PATHOLOGY AND BACTERIOLOGY.—D. R. Bowen, Elizabeth B. Butler, Joan P. Ciantar, A. C. Coulthard, G. C. Davies, H. C. Davies, Janet Dean-Jones, J. A. Emanuel, G. S. Foster, H. Harrop-Griffiths, C. Havard, C. H. L. Howells, T. R. Hunt, Eluned K. Jones, H. T. Jones, Margaret E. B. Jones, W. R. King, J. B. R. Lewis, L. T. Lewis, Constance A. M. Llewellyn, Margaret I. Morgan, V. J. Parker, F. I. Powell, Myfanwy M. G. Prethero, L. T. Rees, G. G. Richmond, Prudence K. Roberts, S. Solomon, Heather Stockdale.

MEDICINE.—T. J. Anthony, A. H. Beynon, B. L. Crystal, Norah C. Curran, D. K. L. Davies, E. D. Edwards, E. M. L. Evans, D. B. Harries, J. M. Hughes, M. G. Jones, Nest Jones, Bernice G. Lewis, J. M. Lewis, Isobel F. A. Mitchell, Margaret Owen, Barbara M. Parker, Beryl P. Roberts, K. I. Roberts, S. L. Stone, W. D. C. Thomas, D. M. Watkins.

SURGERY.—A. J. Barry, D. K. L. Davies, A. S. Jones, M. G. Jones, R. L. H. Jones, J. M. Lewis.

OBSTETRICS AND GYNAECOLOGY.—S. T. James, Bernice G. Lewis, B. F. Richards.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

The Princess Royal paid an informal visit to the College on March 29. Her Royal Highness, who is an Honorary Fellow, inspected the war damage and the restoration work which is in progress, together with the plans for rebuilding the College. She was also shown the surviving Museum specimens being made ready for exhibition.

Surgery Lectures: An Amendment

Owing to the absence of Mr. J. B. Hunter in Jamaica on Government business, the lecture to have been delivered by him on April 24 will now be given by Mr. T. Holmes Sellors. The title of the lecture will remain the same—i.e., "Surgery of the Heart."

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

At a meeting of the Faculty, with Mr. William A. Sewell, President, in the chair, George Howard Bell, M.D. (Glasgow), Leslie John Davis, M.D., F.R.C.P. (Glasgow), Thomas Ferguson, M.D., D.Sc., F.R.C.P.Ed. (Glasgow), Robert Hill, G.M., M.B., Ch.B. (Ayr), Alexander Adam Kirkland, M.B., Ch.B. (Dundee), and James Robertson Preston, M.B., Ch.B., D.P.H. (Glasgow), were admitted Fellows *qua* physician; and Thomas Hugh Crawford Barclay, M.B., Ch.B. (Glasgow), John Cunningham Liddle, M.B., Ch.B., D.L.O. (London), William Laird Milne, M.B., Ch.B. (Milngavie), and Alexander Walker Naddell, L.R.C.P.&S.Ed., L.R.F.P.S. (Glasgow), were admitted Fellows *qua* surgeon.

The Services

Air Marshal Andrew Grant, C.B., C.B.E., K.H.S., has been appointed Director-General of Medical Services, Air Ministry, in succession to Air Marshal Sir Harold E. Whittingham, K.C.B., K.B.E.

CASUALTIES IN THE MEDICAL SERVICES

Died.—Capt. P. G. Fennell, I.A.M.C.

Killed.—Capt. John Mockler, I.A.M.C.

Now officially presumed killed in action.—Capt. Archibald McLellan, R.A.M.C.

Previously reported prisoner of war, now reported died as prisoner of war.—W/Capt. M. G. Graham, R.A.M.C.

Previously reported prisoner of war, now reported missing presumed killed.—Surg. Lieut.-Cmdr. David Noel Ryalls, R.N.V.R.

Wounded.—Major F. Murray; Temp. Major I. Calvert-Wilson; Capt. H. W. Lees; W/Capts. E. D. M. Anderson, J. T. Anderson, M.C., I. H. Baum, R. D. Chalmers, J. D. Comline, G. R. Evans, M.C., R. S. Gibson, E. P. Jones, J. H. McBeath, D. R. I. Mason, D. W. Moynagh, M.C., J. M. B. Pooley, and A. C. Porteous; and W/Lieuts. J. D. Devitt and J. G. Searle, R.A.M.C.

Medical News

The annual general meeting of the Society for the Study of Inebriety will be held at the Medical Society of London (11, Chandos Street, W.) on Tuesday, April 16, at 4 p.m., when Dr. H. J. Norman will give the presidential address entitled "Discursive Thoughts on Alcohol and Drugs," and Dr. W. R. Bett will read a paper on alcoholism and crime in Ceylon.

The annual general meeting of the Food Group of the Society of Chemical Industry will be held on Wednesday, April 17, at 6.30 p.m. at the rooms of the Chemical Society, Burlington House, Piccadilly, W. It will be followed by an address by Dr. C. S. Hanes, F.R.S., on food and phylogeny. The summer meeting of the Food Group will be held in Scotland from May 30 to June 3; the honorary secretary is Mr. L. H. G. Barton, Society of Chemical Industry, 56, Victoria Street, London, S.W.1.

The meeting of the Middlesex County Medical Society arranged for to-day (Saturday, April 13) at Hillingdon County Hospital has been postponed until further notice.

The first post-war annual dinner of the University of Birmingham Medical Society will be held at the Botanical Gardens, Edgbaston, Birmingham, on Friday, June 14, at 7.30 p.m. All past and present students and members of the teaching staff are invited. Tickets 10s. 6d. (graduates) should be obtained from the secretary of the society, the Medical School, Edgbaston, Birmingham, 15. Applications should be made before May 18.

Dr. A. J. Swanton, who has been deputy coroner since 1930, was on March 28 appointed city coroner for Leeds.

Lord Woolton has accepted the office of president of the Health Congress which is to be held at Blackpool from June 3 to 7 next by the Royal Sanitary Institute. The congress will be divided into sections dealing with the following subjects, and presided over by those named: Preventive Medicine, Sir Wilson Jameson, M.D., F.R.C.P. Engineering and Architecture, Sir Reginald Stradling, D.Sc., F.R.S. Maternal and Child Health, the Marchioness of Reading. Veterinary Hygiene, Prof. J. G. Wright, F.R.C.V.S. Food and Nutrition, Prof. S. J. Cowell, M.B., F.R.C.P. Housing and Town Planning, Mr. Norman H. Walls. There will also be conferences of medical officers of health, engineers and surveyors, sanitary inspectors, and health visitors.

Three surgeons from the Argentine are visiting this country. Prof. Egues, who comes under the British Council's auspices, holds the chair of clinical surgery in the University of Buenos Aires. Outside London he will visit Edinburgh, Manchester, Birmingham, and Oxford. Dr. Castro O'Connor, who is plastic surgeon to the Institute of Clinical Surgery, Buenos Aires, and studied with Prof. Florey at Oxford in 1932, and Dr. J. L. Curutchet, formerly surgeon to the Rawson Hospital, Buenos Aires, and surgeon director of the San Martin Hospital at Tabacal, who is specially interested in orthopaedics, are here under the auspices of the O'Connor Scholarship Scheme, but the British Council is helping with their programmes.

The Royal Medico-Psychological Association has changed the date of its May quarterly meeting; this will be held at the Retreat, York, on Friday, May 17, the council and committees meeting on the previous day. The subjects for discussion include child psychiatry and the history of the Retreat. Members who propose to attend should write without delay to Dr. A. Pool, medical superintendent of the Retreat. The annual meeting of the Association will be held at the Royal College of Physicians of Edinburgh on July 17, 18, and 19, with the president-elect, Prof. D. K. Henderson, in the chair.

EPIDEMIOLOGICAL NOTES

Discussion of Table

In *England and Wales* further rises occurred in the incidence of measles 270, whooping-cough 184, and scarlet fever 182, while a fall was recorded for diphtheria 58 and dysentery 43.

The rise in the notifications of measles was mainly contributed by London and Lancashire, with increases of 167 and 69, while the only decrease of any size was Norfolk 43. The feature of recent measles returns is the relatively large incidence in London, where one-third of the total cases have appeared during the past three weeks.

A small general rise in scarlet fever was reported, the only large local increase being Glamorganshire 33. The largest variations in the local trends of whooping-cough were an increase in Hertfordshire 62 and a decrease in Essex 33. Notifications of diphtheria fell in Yorkshire West Riding 22 and London 11, but rose in Northumberland 11.

An outbreak of dysentery involving 24 persons was reported from Staffordshire, Stoke-on-Trent C.B. Of the 104 cases in Lancashire, 53 were from the outbreak in Chorley M.B. Other large totals were those of London 26, Leicestershire 25, Warwickshire 20, Middlesex 14, Essex 13.

In *Scotland* an increase of 26 in cerebrospinal fever resulted in the largest weekly total of recent months. Diphtheria returned to its recent level with an increase of 60 cases. Rises were also reported for measles 35, scarlet fever 28, and dysentery 25. The largest returns for dysentery were Glasgow 16, Edinburgh 11, and Renfrew County 13.

In *Eire* there were increases in primary pneumonia 30, whooping-cough 23, diarrhoea and enteritis 15; and decreases in scarlet fever 19, and diphtheria 7.

In *Northern Ireland* the only change was an increase of 23 in scarlet fever, due to isolated cases in several areas.

Statistical Review, 1941

The statistical review of the Registrar-General, which, except for a limited number of copies for 1939 and 1940, has not been published during the war, makes its reappearance with Part I (Medical) for 1941. Two important changes have been introduced. The system of using the 1901 population as a basis of standardized death rates is to be replaced by a new procedure for standardizing mortality for comparative purposes. For the first time the actual number of births occurring in a calendar year are shown, instead of those which were registered in that year.

Week Ending March 30

The notifications of infectious diseases in England and Wales during the week included: scarlet fever 1,393, whooping-cough 2,092, diphtheria 478, measles 2,282, acute pneumonia 1,079, cerebrospinal fever 74, dysentery 356, paratyphoid fever 4, typhoid fever 8, smallpox 2. Deaths from influenza in the large towns numbered 50.

No. 12

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended March 23.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1946					1945 (Corresponding Week)				
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)
Cerebrospinal fever	67	5	58	1	1	88	5	27	2	5
Deaths		1	1				3	—		
Diphtheria	417	22	115	43	14	499	25	140	96	10
Deaths	6	1	—	1	—	5	—	1	1	—
Dysentery	332	26	74	1	—	420	69	205	2	1
Deaths				—	—				—	—
Encephalitis lethargica, acute	—	—	—	—	—	1	—	1	—	—
Deaths		—					—			
Erysipelas			55	10	2			44	9	2
Deaths		—					—			
Infective enteritis or diarrhoea under 2 years				53					12	
Deaths	55	7	6	9	2	49	6	10	6	2
Measles*	1,875	597	572	39	1	25,507	1601	430	48	41
Deaths	3	—	5	1	—	32	4	—	—	2
Ophthalmia neonatorum	67	9	9	—	1	81	5	7	2	—
Deaths										
Paratyphoid fever	4	—	2(B)	—	—	3	1	1(B)	—	—
Deaths	—	—	—	—	—	—	—	—	—	—
Pneumonia, influenzal	976	60	35	21	3	866	45	7	9	6
Deaths (from influenza)†	77	10	7	3	4	28	4	3	1	1
Pneumonia, primary		82	339	58	13		41	250	41	10
Deaths				20					18	
Polio-encephalitis, acute	1	—				1	—			
Deaths		1					—			
Poliomyelitis, acute	8	—	—	1	—	4	—	—	1	—
Deaths		1					—			
Puerperal fever		3	7		—		5	6		1
Deaths										
Puerperal pyrexia‡	142	5	18	—	—	173	11	14	4	—
Deaths		—					—			
Relapsing fever	—	—			—	—	—			—
Deaths										
Scarlet fever	1,325	104	192	12	37	1,522	53	201	21	34
Deaths	—	—	—	—	—	1	—	—	—	—
Smallpox	—	—	1§	—	—	—	—	—	—	—
Deaths				—	—				—	—
Typhoid fever	6	—	1	9	—	8	—	7	7	—
Deaths	—	—	—	—	—	—	—	—	—	—
Typhus fever	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Whooping-cough*	2,190	192	122	48	4	1,453	68	172	49	12
Deaths	6	—	1	1	—	9	—	2	3	1
Deaths (0–1 year)	478	69	73	35	16	387	53	44	42	20
Infant mortality rate (per 1,000 live births)										
Deaths (excluding stillbirths)	6,197	972	846	257	168	4,996	705	600	261	148
Annual death rate (per 1,000 persons living)			18·6	16·5				13·6	16·8	
Live births	8,198	1199	1024	346	270	6,366	739	833	351	245
Annual rate per 1,000 persons living			20·6	22·2				16·7	22·6	
Stillbirths	245	32	42			220	20	35		
Rate per 1,000 total births (including stillborn)			39					40		

* Measles and whooping-cough are not notifiable in Scotland, and the returns are therefore an approximation only.

† Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

‡ Includes puerperal fever for England and Wales and Eire.

§ One case removed from a troopship.

Letters, Notes, and Answers

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ANY QUESTIONS?

Penicillin for Styes

Q.—*An otherwise healthy child aged 2 suffers from recurrent styes. No local treatment has been applied except penicillin cream to one particularly severe stye, and this was effective. I am advised that as the infection is apparently staphylococcal a single penicillin injection would probably clear up the condition. Is this correct?*

A.—A single injection of penicillin, however large the dose, will not clear up anything (with the possible exception of gonorrhoea). For the treatment of any staphylococcal infection intramuscular injections would have to be continued three-hourly day and night for at least several days. Such treatment is certainly not indicated in the case described, both because it is extravagant and troublesome and because it might well fail. Blepharitis calls for local treatment, and the application of penicillin cream, continued patiently for a week whether any styes appear or not, will probably eradicate the infection.

Asthma at Menopause Age

Q.—*A female patient aged 43 was diagnosed some nine months ago as a case of spastic bronchitis. The patient's chest condition this winter has appeared even more "moist" than last winter. Her breathing, especially at night, is noisy, and there is some dyspnoea on exertion. She does not smoke. I note a reference to menopausal rhinitis in the issue of March 2 (p. 341). May an approaching menopause in my patient, though there seems little definite evidence of this, have any bearing on her condition?*

A.—The history of noisy breathing at night is suggestive of asthma; if the sputum is purulent it is probable that a bronchial infection is an important factor. The menopause is not likely to be the cause of the condition. The patient should be investigated by skin tests in regard to sensitivity to dust, feathers, etc. It might be worth while trying the effect of removing all feathers and dust, etc., from the bedroom. In brief, the full investigation of an asthmatic should be undertaken.

Rhinitis after Alcohol

Q.—*For nearly ten years I have suffered from allergic rhinitis with recurrent polyp formation. Half an hour after taking any wine, spirits, or beer, acute rhinitis develops. Is it possible to desensitize myself against this? And if so, what method should I use?*

A.—Since the allergic rhinitis occurs with different varieties of alcohol, the offending agent must be the alcohol and not the grain or fruit from which the particular variety of alcohol is made. It is unlikely that the reaction is allergic in the narrow sense, for there is no evidence that alcohol can act as a haptene or change the body proteins in such a way as to give rise to drug allergy. It is much more likely that the alcohol dilates the vessels of the polypi and nasal mucosa, and this in turn gives rise to a reflex rhinorrhoea. It would not be possible to desensitize, as vasodilatation is the normal physiological response to alcohol. Inhalation of amphetamine ("benzedrine") or carbon dioxide (Bray, G. W., *Recent Advances in Allergy*, 3rd edit., 1937, p. 309) might give relief. It is also believed that alcohol may pave the way for allergy by increasing the permeability of the gastro-intestinal mucosa to proteins ingested at the same time. For this there would seem no remedy except abstention.

Arsenic and Horse-nettle

Q.—*An epileptic woman aged 27 has been taking for nine years 1/2 oz. (14 ml.) of the following prescription, three times a day: liq. arsenicalis 1 dr. (3.5 ml.), pot. brom. 5 dr. (17.5 ml.), sod. bicarb. 4 dr. (14 ml.), tr. belladonnae 2 dr. (7 ml.), ext. Solanii carolinense 14 dr. (49 ml.), aqua ad 12 oz. (340 ml.). What is ext. Solanii carolinense? Why does she not develop arsenical poisoning?*

A.—Ext. *Solanii carolinense* is an extract of the American horse-nettle, which grows in the Southern States, and presumably in Carolina. The liquid extract (1 in 1) has been employed in epilepsy, the dose being 15 to 60 min. (0.9 to 3.5 ml.). It contains a toxic principle, solatubine, which seems to be the same as the saponin-like substance, solanine, found in various species of *Solanum*. There is also said to be an organic acid, solanic acid. The American horse-nettle is sometimes called "apple of Sodom."

The second question, why the patient does not develop arsenical poisoning, is answered by saying that the patient does not receive enough arsenic trioxide for that to happen. Calculation shows that her daily intake is not more than 5 mg., or about 1/12 gr., and this is an amount likely to develop resistance to arsenic when taken regularly. The single toxic dose is 100 mg., or 1½ gr.

Death in an Ambulance

Q.—*When a patient dies while being transported by ambulance what is the correct procedure?*

A.—If a patient should die while being transported by ambulance the driver should take the body to the nearest hospital, or to the hospital to which the patient was travelling, for verification of the fact of death. The hospital may or may not take the body into their mortuary, or may direct the driver to the city mortuary. It is the duty of the driver to notify the police, who in turn will notify the coroner, if in England, or the fiscal, if in Scotland, who will take the necessary steps concerning the disposal of the body. If the body is taken to a hospital mortuary it is customary for the hospital authority to notify the police.

Rectal Prolapse

Q.—*What is the best treatment for rectal prolapse with a large sphincter and moderately severe pruritus ani? Cauterization and injections of sclerosing fluid have been tried with no success.*

A.—If the prolapse is large and very troublesome and thorough palliative treatment has been a failure, then the patient should be submitted to operation. The most favoured operation at present is simple amputation of the prolapse from below with suture of the divided ends of the bowel. Operation gives the most satisfactory results and does not carry any risk.

Infection by Epidermophyton of Sabouraud

Q.—*A patient has had for twenty years or more a dry, scaly condition between the fifth and fourth toes, worse in the summer, with occasional cracks of the skin which are not very painful. What is the condition and how can it be cured?*

A.—The condition as described above is probably caused by infection with the epidermophyton of Sabouraud. The diagnosis can be verified by microscopical examination of the epidermis. This is a useful preliminary to treatment, since all interdigital lesions are not necessarily due to a ringworm fungus. In spite of the introduction of many new applications, Whitfield's ointment and Castellani's fuchsin paint are still the best topical applications. The long history in this case is against the prospect of easy or rapid cure.

Splenectomy

Q.—*What are the indications for splenectomy, and what is the rationale in each instance for this line of therapy?*

A.—The only absolute indication for splenectomy is rupture of the spleen; in more medical conditions the recommendation

of splenectomy usually has to be qualified. It should also be noted that with modern methods of investigation and treatment, ensuring accurate pre-operative diagnosis and adequate preparation by transfusion, etc., the risk of operation has been greatly diminished.

Splenectomy practically always arrests the symptoms of familial acholuric jaundice, and should be recommended whenever the anaemia, jaundice, or cholelithiasis is bad enough to bring the patient under medical attention. Splenectomy is of no value in other congenital haemolytic anaemias, such as sickle-cell anaemia and Mediterranean anaemia. In acquired haemolytic anaemia the effect of splenectomy is always problematical, and the more the blood picture departs from that of acholuric jaundice the less likely the operation is to be successful. Patients with frank megalocytosis hardly ever do well. In acute haemolytic anaemia not responding to transfusion the patient should always be given the chance of benefiting from splenectomy, but not too much should be promised.

Splenectomy is the only effective remedy for thrombocytopenic purpura, but there is a small proportion of failures and the relief is not always permanent. As thrombocytopenic purpura may remit spontaneously, splenectomy is not usually advised unless the purpura is established and chronic, or the symptoms are urgent and endanger life.

The third commonest indication for splenectomy is splenic anaemia. In most, if not all, cases of splenic anaemia the disease begins in the liver and the splenomegaly is merely a symptom of portal hypertension. Operation is justifiable only if the spleen itself is producing ill effects, such as local pain and dragging, thrombocytopenia, or extreme leucopenia. Splenectomy cannot be expected to prevent haematemesis in splenic anaemia, as this is usually due to oesophageal varices. Similar considerations govern the removal of the spleen in Gaucher's disease, sarcoidosis, and some of the Hodgkin's group of reticuloses; it is legitimate to remove the spleen when it is acting as a painful tumour or producing severe leucopenia or thrombocytopenia.

The only absolute contraindications to splenectomy are osteosclerosis and myelofibrosis, where the spleen enlarges to take over the functions of the bone-marrow, though it must be confessed that the enlargement is often sadly excessive and unproductive.

Pelvic Measurements of Western Women

Q.—*Mary W. Hamilton in the "Fortnightly Review" (Dec., 1945) states that the pelvic measurements of Western women are getting smaller with each generation, particularly in the towns. Can you tell me whether this assertion is founded on any accurate observations?*

A.—With the development of civilization and particularly the growth of large industrial centres, with the shift of population from the country to the towns, there can be little doubt that the incidence of contracted pelvis increased. This was mainly due to rickets, or at least was a manifestation of poor living conditions, overcrowding, inadequate diet, etc. The difference between urban and rural dwellers is still to be seen is some areas. Thus H. R. MacLennan (*J. Obstet. Gynaec. Brit. Emp.*, 1937, **44**, 245) reported that, whereas contracted pelvis—mainly due to rickets—was very prevalent in Glasgow and other industrial areas, it was rare in the country areas of Scotland. The effect of civilization, or rather unhealthy living conditions, is also shown by the frequency of contracted pelvis among negresses in American cities.

Nevertheless, the living conditions and the general health of even the poorer classes in the Western countries are rapidly improving, and have been improving for a few generations. The general physique of women is better, rickets is becoming comparatively rare, and contracted pelvis is less common. Although a few "black spots" remain, this is true even for large congested areas, such as London. We no longer have to deal with cases of gross pelvic contraction—such as confronted obstetricians at the end of the last century. The size of the pelvis is largely a reflection of the general physique of a woman. With the improvement which has come about during the last few decades it would be difficult to substantiate the statement quoted above.

The article mentioned is not available for study, but perhaps the author was referring to characteristics other than the *size* of the pelvis. It is alleged, as a result of comparison between the ease of labour in primitive and in Western peoples, that the drift from "Nature" has affected the *shape* of the pelvis and the mobility of its joints. The unnatural postures and work of modern women are said to make the inlet less round. However, these comparisons are difficult to interpret, for other factors, such as the size of the foetal head in different races, the efficiency of the uterus, and the psychological approach to labour, enter into consideration. This aspect of the case is dealt with by Kathleen Vaughan in *Safe Childbirth* (1937, London, Baillière, Tindall and Cox).

New Antibiotics

Q.—*The bacteriological and biochemical literature is full of the results of experimental work in the field of antibiotics. Are there any antibiotic substances other than the sulphonamides and penicillin worthy of a place in routine clinical therapeutics? Must our specific therapeutic attacks end when we have proved an infection to be caused by sulphonamide- and penicillin-resistant organisms?*

A.—The answer to the first part of this question is, Yes—tyrothricin and streptomycin. The former is on the market, and it is to be hoped that the latter will eventually be available in England. At present supplies of streptomycin are very meagre even in the U.S.A., which is the country of its origin. There are several other antibiotics which give promise of therapeutic value for particular purposes. The numerous papers to which the questioner refers are chiefly accounts of early stages in the work which has to be done before such a substance can establish itself in therapeutics. To show that it has an antimicrobic action is only a beginning; it is then necessary to study its toxicity and other features of its behaviour in the body. It may also be a long process to work out a method by which a substance can be adequately purified. Finally, the manufacturer has to face the hazards and difficulties of production on a commercial scale, and only after this can adequate clinical trial be begun. It is five years since the outstanding therapeutic properties of penicillin were recognized, yet even now supplies of it are limited. Progress, even in times of peace, with further antibiotics which merely extend the scope of such treatment cannot be expected to be much more rapid.

"BAL"

Q.—*Now that BAL is off the secret list, I would like to know if it was issued to any of our Services or A.R.P. during the war. Some American doctors told me that it had been issued to American troops.*

A.—BAL was issued to the medical services and to the Ministry of Health for hospital use. The ointment was never a personal issue to British Forces, though production of personal outfits was in hand at the cessation of hostilities. British troops were, however, provided with eyeshields which, like the respirator, afford complete protection to the eyes not only against lewisite but also against other gases in the form of spray or droplets. BAL was a personal issue to American troops in the Pacific area and S.E. Asia, but eyeshields were not issued by the U.S.A.

Altitude and High Blood Pressure

Q.—*What effect has high altitude on blood pressure? Should patients suffering from high blood pressure leave such altitudes—for example, in Iraq?*

A.—For permanent residence altitudes below 5,000 ft. (1,524 m.) have very little effect on the circulatory system. From 5,000 to 10,000 ft. (1,524 to 3,048 m.) circulatory effects begin to appear, and from 10,000 to 15,000 ft. (3,048 to 4,572 m.)—e.g., in Chile and Bolivia—the circulatory effects become important and a number of special conditions attributable to altitude are found among the higher age groups of the population—e.g., Monge's disease.

I think the questioner's interest is undoubtedly in the 5,000 to 10,000 ft. altitudes. Here there will be an increased red cell blood count, leading to increased blood viscosity; this adds considerably to the work of the heart and is often accompanied by a rise in blood pressure; in fit individuals this should not amount to more than 15 mm. Hg. There is also a loss of buffer substances from the blood, which makes respiration very unstable to exercise. Altitude is an added stress to high

blood pressure, and altitudes above 10.000 ft. (3,048 m.) are undesirable in such cases. Altitudes less than 5,000 ft. (1,524 m.) are unlikely to be a serious factor aggravating the condition. Between 5,000 and 10,000 ft. the morning basal resting pulse should be a guide to indicate whether the condition is sufficiently serious to warrant the patient going to a lower altitude. If this is more than 20 beats per minute above the normal expected at sea level for a patient of the build, age, and habits of the case under consideration, this should be grounds for going to a lower altitude if possible.

INCOME TAX

Replacement of Instruments and Books

A. C., who is in the public health service, has been refused a request for an allowance of the cost of replacing out-of-date medical textbooks.

⁂ The expenses rule applicable to the earnings of employment is a stringent one. To be allowable the expenses under Schedule E must be incurred "wholly, exclusively, and necessarily in the performance of the duties" of the employment. The difficulty in such a case as this arises out of the word "necessary." The courts have held that expenses of the kind specified cannot be regarded as necessary unless the maintenance of the asset—i.e., the medical library—is required as a condition of the employment.

Newcomer to the United Kingdom

R. W. came to this country in February, 1945, to take up a salaried appointment. Should he not be taxed for the period to April 5, 1945, as if the income for that period were the income for a full year?

⁂ Yes—i.e., the full year's "personal" and any other allowances should be set against the income for the period in question. If tax has been paid on the basis that only a proportion of the allowances was given, R. W. is advised to take the matter up with the inspector of taxes. (It is assumed that R. W. ranks as a British resident for 1944–5; that carries with it liability to tax on income arising abroad but received in this country.)

Pensioner: Deduction of Tax

G. C. B. has two sources of income falling under "pay-as-you-earn," and tax is deducted at 10s. in the £ from the income arising from one of the two sources. Can this be correct?

⁂ Each taxpayer is entitled to certain allowances—the "personal allowance," the "relief in respect of earned income," and so on. If all these allowances are given from one source of income, the fact that other sources are taxed at the standard rate would be correct. G. C. B. should have received a "coding notice" showing what allowances have been made in connexion with that source of income which is taxed at less than 10s. in the £, and reference to that notice should show whether he is receiving *all* his allowances from that source.

Whether within "Pay-as-you-earn"

"D. X." has returned to his partner on demobilization on the following terms: "D. X." receives a basic salary plus a proportion of the profits. He pays his own expenses for car, telephone, surgery, and maid. Does he come under "pay-as-you-earn"?

⁂ On these facts it is assumed that "D. X." works in the practice as an employee and not as a partner, and on that assumption he is within "pay-as-you-earn." His "coding" should take into account the probable amount of his expenses, as well as the personal allowances he can claim. It is advisable to get in touch with the local tax office suggesting that if they insist on the application of "pay-as-you-earn" in these circumstances, then an allowance for expenses amounting to a specified sum (giving some details) should be incorporated in the coding.

Additional Emoluments: Expenses

"ORTHOPOD" is a specialist in a Service hospital but looks after some civilian patients and receives money for so doing from the county council. Can he deduct expenses incurred in running a car, subscribing to professional journals, etc.?

⁂ If the work done for the county council is the result of an appointment under the council, the fees received would presumably be emoluments of an employment assessable under Schedule E, and these expenses would not be allowable. That is probably the case; but if "Orthopod" can persuade the local tax authorities that the fees are of such a nature that they are chargeable under Schedule D, then he can claim a reasonable expenditure on professional journals. If the car is used (apart from private purposes) only, or almost exclusively, for travelling between his residence and the hospital the expense is not allowable under either Schedule D or Schedule E.

LETTERS, NOTES, ETC.

Interstitial Mastitis

Mr. JAMES PHILLIPS (Bradford) writes: With reference to the question and answer on this subject (March 23, p. 458) may I suggest that the advice to treat by "masterly inactivity" a patient who has an "area of typical interstitial mastitis" in the left upper quadrant of a breast is fraught with danger? During a long surgical life it has been my misfortune to have to deal with quite a number of cases in which the result of acting in this way has been the loss of the patient's life. In one instance the victim was a hospital matron and the surgeon one of her "chiefs." I well remember an early morning visit from a doctor friend who burst into my consulting room and exclaimed, "Phillips, I have killed my wife!" He went on to explain that two years earlier he had been asked to look at his wife's breast; had decided that her condition was mastitis and told her that there was nothing to worry about. Of course the patient who is given this verdict must either accept it unquestioningly and forget about her symptoms or else wonder whether there can possibly be the beginning there of a malignant growth. The doctor's wife, having complete confidence in her husband's ability, was able to adopt the first alternative and only on that morning had she casually remarked that the condition of the breast was altering. On examination a fully developed cancer with evident metastases was disclosed. Had this patient been less certain of the correctness of her husband's verdict or had he suggested to her that she should be "kept under periodic observation in view of the possibility of a malignant change" it does not require a vivid imagination to picture the ever-present—though largely subconscious—awareness that some day, instead of the "no need to worry" verdict, there might be an intimation that an extensive operation was required in order to deal with a condition in which the prospects of cure were far from certain. Contrast such a patient's mental state with that of a patient from whom I removed a breast for simple mastitis and who, whenever I see her, beams and tells me that the operation removed from her mind a never-entirely-absent dread lest a cancer was going to develop in her breast. At the age of 46 at least 3 out of 4 "indurations" in the breast, in my experience, prove to be malignant.

Proctalgia Fugax

Dr. E. GALLOP (London, S.W.1) writes: I have sometimes thought that this condition could be cured by a local anaesthetization of the rectum, but I have not seen a case for years and I have had no opportunity of trying. Perhaps one of your contributors will. The procedure is simple. A suppository of novocain, or one of its many analogues which a pharmacist can easily dispense, is pushed well into the rectum. I should expect the pain quickly to disappear and recurrences to be infrequent. If there is one it could be treated in the same way, and I fancy there would soon be an end to them.

Nicotinic Acid Amide in Diabetes

Dr. W. GORDON writes to say that his letter on this subject published in the *Journal* of Feb. 9, 1946 (p. 218), brought him several replies. He was then in the course of moving house and the letters have been lost. If his correspondents will send him their addresses again to 49, St. Margaret Street, Rochester, Kent, he will immediately reply.

The Source of a Quotation

Dr. A. F. FOSTER-CARTER (Frimley) writes: The views expressed by Dr. Clifford Allen (March 23, p. 449) are so admirable that I risk a charge of pedantry by drawing attention to a minor inaccuracy. However, I would like to point out that Isaac Newton was not the author of the remark "There, but for the grace of God, etc." The *Dictionary of National Biography* ascribes the saying to John Bradford (1510?–1555) on seeing some criminals being taken to execution. It has also been attributed, but probably wrongly, to Richard Baxter (1615–1691), on seeing a drunkard in a ditch.

Long Run of B.M.J. for Disposal

Dr. R. S. CREED, New College, Oxford, will give, in return for cost of packing and transport, an unbound set of the *Journal*, believed complete, from July, 1923, to December, 1945, to a library or institution requiring it. Applications should be sent to him as soon as possible.

New Year Honours

By an oversight the name of Col. Charles Girdlestone Terrell, M.B., Ch.B., lately Member of the Assam Legislative Assembly, Medical Officer, Indian Tea Association, Assam, was omitted from the Medical New Year Honours published in the *Journal* of Jan. 12 (p. 60). He was appointed O.B.E. (Civil Division).

Another omission from our New Year Honours List has been brought to our notice. Squad. Ldr. (then Fl. Lieut.) Geoffrey Hugh Templeman, M.B., Ch.B., R.A.F.V.R., was appointed M.B.E. (Military Division).